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OFFICES: 423 AND 424, STRAND, LONDON, W.C., AND 1, 2, AND 3, BEDFORD STREET (ADJOINING).

Two Lectures
ON
INJURIES OF NERVES.

Delivered at St. Bartholomew's Hospital on March 19th and 21st, 1902,

BY ANTHONY A. BOWLBY, C.M.G., F.R.C.S. ENG.,
JOINT LECTURER ON SURGERY.

LECTURE II.[1]

Delivered on March 21st.

SUTURE OF NERVES.

GENTLEMEN,—The suture of nerves has been the usual practice of surgery for something like 20 years and the reason it was not adopted previously to that time was because very erroneous ideas prevailed. It was generally believed that nerves would not unite, and in these circumstances, believing that no good was to be obtained by suture, a divided nerve was left pretty much to itself. Then, in addition, there was the fact that most wounds in those days suppurated; and if you had sutures buried in such a wound the wound did not heal until the sutures came away. Therefore surgeons were not at all inclined to leave silk inside a wound and silk was then practically the only material which was used. Consequently, up to about 20 years ago, or a little more than that, nerves were not united at all by suture. At the present time it is the custom to unite nerves by suture in any case where they are evidently wounded and in a person who has recently been injured. The chief cause of failure of primary suture of a nerve is sepsis. If a wound heals soundly and the two ends of a nerve have been coapted some union will certainly result, and you may take that as the main fact in the matter of primary suture of nerves.

SECONDARY SUTURE.

Let us pass on to consider what is to be done when a nerve has been injured and the wound has healed. In cases of this kind where the nerve is sutured by a secondary operation this operation is generally talked of as "secondary suture." As far as the rules for that are concerned you may say there is only one rule—that in all cases where a wound has been inflicted and a nerve divided it should be sutured by an operation, provided that that operation is reasonably feasible and is not dangerous out of proportion to the injury which the patient has suffered. There are, of course, places in the body where nerves may be divided, for instance deep down in the neck, and where perhaps only some slight and unimportant filament has been cut, and the operation would not be worth while undertaking in such a case considering the risk and difficulty, or the very slight inconvenience that the patient might suffer. But putting aside such considerations you may say in general terms that the operation of secondary suture is to be undertaken whenever a nerve has evidently been divided and also in cases where you suspect its division. In cutting down upon the part in order to ascertain the extent of the injury and to approximate the nerve ends, the first thing to remember is that the easiest place to find the nerve is above and below where the scar is and not at the scar. For example, a very large number of persons injure the median or ulnar nerves about the wrist joint, generally just above it, and the commonest way is by falling upon glass or broken crockery or by putting the hand through a pane of glass. In these cases it often happens that tendons are divided as well as nerves and if an operation for suture of tendons and of nerves is not undertaken at the time of the accident they become very awkwardly matted together, so that it is a matter of considerable difficulty to dissect out the nerve from the scar. It is much easier in these cases to make your incision sufficiently long to expose a healthy piece of nerve above and a healthy piece below, tracing these towards the scar from both sides. You can then easily enough separate the nerves from the rest of the matted tissues, and having separated them you can refresh the divided ends and suture them together.

In many of these cases there is not too much material to spare, for the nerve ends have often become widely separated and you must consequently not sacrifice more of the nerve than need be. Do not cut off the bulb on the upper end, for it is composed of young nerve fibres. Its tip merges in the neighbouring fibrous tissue of the scar, and that of course must be cut off, but the upper part of the bulb of a nerve is about the best material for suturing. It is composed of numerous rapidly growing nerve fibres and it holds a suture exceedingly well because it is tough and resistant. Therefore, when you have separated the two ends and are dealing with the upper end be moderate in cutting away the bulb and leave part of it. As far as the lower end of the cut nerve is concerned the whole of it is often shrunken and smaller than natural, because either it has completely degenerated or has been imperfectly regenerated. Remember that all this distal end is in the same condition, that you will not gain anything by cutting off successive pieces of it, and that you will not improve the cut section and find a better piece of nerve by cutting more of it off. It is all equally degenerated or regenerated. You have only to cut off enough to be sure that you have freed it from the scar tissue and then suture it to the uppermost part of the bulb. In the next place, it is often a trouble to get the cut ends together, because there may have been a good deal of separation. But generally much can be done by the position in which the limb is placed after such an operation. Thus in operations upon the median and ulnar nerves above the wrist, a place where you often have to perform nerve suture, if you keep the wrist and the elbow flexed it is surprising how you can bridge across the gap and bring the separated nerve ends together. Having done that and sewn up the wound the most important thing is to put the arm up in either a splint or in bandages so as to prevent any undue tension being thrown upon the nerve which has recently been joined. Any strain might easily tear it and it is quite remarkable to see how in the course of two or three weeks after the nerve has been united the flexed wrist can be extended and the flexed elbow brought straight so that the cramped condition can be gradually got rid of and in a few weeks the hand and forearm become relatively useful. You need not be afraid of putting a good deal of tension upon the nerve in bringing it together if you can relieve that tension by flexion of the wrist or elbow.

As to the chief causes of failure, the first is that which I have mentioned before in regard to primary suture—sepsis. If you do secondary suture and the wound suppurates you are very liable to have failure. But there is another cause of failure—namely, the lapse of time, for the number of years that may have passed since the original injury may also have induced such changes in the motor fibres, possibly in the spinal cord and certainly in the muscles, that as far as motion is concerned you may have complete failure to record through no fault of your own.

Let me tell you a few cases, briefly, to indicate what amount of success you may expect after a given number of years have elapsed. A student at this hospital when he first entered here had 10 years previously divided his ulnar nerve. After he had been at the hospital two years he showed me his hand. It was an atrophied hand having the characteristic shape of ulnar paralysis. He wanted to know whether operation was likely to be of any use at the end of 12 years. I told him I did not anticipate that any success would attend operation as far as restoration of muscular power was concerned but that I could not speak with the same certainty with regard to sensation and that he might get some return of sensation. He was quite willing to have an operation and accordingly one was performed. The ends of the nerve were found and were sutured together. There was no trouble, the wound healed well, and a few weeks afterwards he began to have restoration of sensation. Ultimately he experienced a good deal of improvement though he never had perfect restoration of sensation to the part. As to motion he had no improvement at all; the muscles remained just as atrophied and paralysed as ever. Were he alive now—which I am sorry to say he is not—I am afraid we should have found that no further change in this direction had occurred. But for eight years after the operation was undertaken he had no improvement in the muscular power of the part, and I think you may take it that he never would have had.

Now take a case in which the disability had lasted half

[1] Lecture I. was published in THE LANCET of July 19th, p. 129.

that time. An officer was injured in his elbow by a shell wound about 20 years ago in Egypt. For six years he had ulnar paralysis and a good deal of pain at times; and it was the pain which induced him to have an operation undertaken with a distant hope of possible return of power in the hand. An operation was undertaken, the ulnar nerve was found, and it was sutured without trouble, but as far as muscular power is concerned the operation remains a complete failure. He got a slight return of sensation, but even to the present day he has nothing like normal sensation in the part. In that case also the wound healed by first intention without trouble. So you see that after six years the same as after 12 years there was no attempt at the formation of new muscle, although there was in both of these patients a slight improvement in sensation.

Now let us go to four years. A man divided his median and ulnar nerves and four years afterwards an operation was undertaken for their suture. He had a good deal of improvement in sensation and a very little return of muscular power. He was satisfied himself that it was well worth while to have had the operation done; but I must say, looked at impartially, it could not be regarded as a success.

Now another case. A man had his ulnar and median nerves sutured after two years and four months. You see we are getting to nearer periods. In the course of three years from that time he had some improvement of muscular power, but after that he had no material increase of that improvement. So it took him a long time to mend his muscles at all and then he only mended them imperfectly.

In another case in which a man divided his ulnar nerve operation was done one year and 11 months afterwards and the nerve was united without trouble. At the end of one year and nine months more he had good voluntary power and his muscles reacted to electrical stimuli. So you may say that that was a fairly successful case. He had a good deal of restoration of muscular tissue and a good deal of return of sensation. That would be called a successful case, though, as I shall tell you directly, one has to consider the meaning of "success." The condition was not as good as before the injury, but it was much better than immediately before the operation. Those, then, are cases in which operation was undertaken at periods of time varying from one year and 11 months to 12 years and with the exception of one case, as far as motion was concerned, the operations were practically failures, though all the patients had some improvement in sensation.

Next notice in the two following cases how irregular is the interval between the time of suture and the time of return of sensation and motion, and notice also that it has not any direct connexion with the length of time which has elapsed since the injury in cases where an operation has not been delayed for as much as two years and in many cases where an operation was performed early.

An ulnar nerve was sutured four weeks after it had been divided. At the end of nine months more the muscles were still absolutely wasted and no return of muscular power was seen. Nine months later than that the patient had nearly complete recovery of his muscles and the faradic contractility returned soon afterwards. In that case, where only four weeks had elapsed, it took more than a year to repair the muscles and about the same length of time to get good sensation. In another case a man had his musculo-spiral nerve divided and it was not sutured till five weeks afterwards. In six months he had a slight return of power and electrical reactions were present in one year. You see, then, that it is difficult to speak positively about the amount of time which will elapse in a case of secondary suture before the good effects of your operation are evident. I think there are no known cases in which restoration of muscles has been at all perfect when operation has been delayed for as much as four years, that in most cases where an operation has been delayed for more than two years there is likely to be failure, and that in other cases where the operation has been done after a varying number of weeks or months, but less than two years, it is at least about nine months or more before motion is restored, and it may be a year or two. All this is very vague, you may say, but you can at all events be certain that your patients will have a considerable time to wait for a cure and you must tell them that although an operation is ultimately going to be successful there will be no improvement in power for at least six months.

Now, what is the effect of operation on different nerves? Do nerves unite differently from each other? I have not the slightest doubt that they do, as far as the utility of the part is concerned. If you were merely to consider the amount of sensation to the prick of a pencil or the amount of regenerated muscular tissue you might be inclined to say that there is not very much difference. But when you compare the actual practical results of union of a median or ulnar nerve by either primary or secondary suture with the results of repair of the musculo-spiral or peroneal nerves there is no doubt that, as far as restoring the part which is paralysed to its natural condition is concerned, it is much more difficult to restore a normal hand than it is to restore a normal forearm, upper arm, or leg. I do not think that this conclusion presents any difficulty when you consider how very complex are the minute movements of the hand and how very important it is to have in the hand complete and accurate sensation. A comparatively slight amount of sensation in the outer part of the leg or the outer part of the arm is all that anybody cares about; it is of no particular importance to feel specially well with the back of one's forearm, but it is of the utmost importance to feel well with the tips of the fingers. Therefore restoration of sensation, imperfect though it be, which may be quite satisfactory for one part of the body may be very unsatisfactory for another part. If you have to do with a man who has recently divided his ulnar or his median nerve you will say that this must be sewn together by primary suture, and you may properly say that in the course of time the man will, as far as his work is concerned, if he be, say, a navvy, be completely restored; that is to say, he will have a hand which is useful and he will have as much sensation in it as he will care to have for his work.

But take another case, one in which the ulnar or median nerve is divided in a man who is a cabinet-maker or a pianist or a violinist, conditions of work in which it is essential that sensation and minute movements in every part of the small muscles of the hand should be as complete and natural as possible. What is the expectation in a case like that? It is that for this sort of fine work there will never be as good a hand as the man had before. Therefore you may say in general terms that you do not expect to get a complete and satisfactory recovery, as far as muscular power is concerned, in a man whose hand has to be used for certain particular objects which require the perfection of movement in the small muscles. I am sure that no man who played the violin, for example, and divided one of the chief nerves of his left hand would ever be able to play again with the same facility, whatever operation was undertaken and however soon after injury it was performed. The same is true of the sense of touch. It is one thing to restore a sufficient amount of sensation after having divided the musculo-spiral nerve and sutured it, for the parts which it supplies may be quite sufficiently innervated for the purposes of the patient, but if you divide the ulnar or median nerve in a man who has to use his hands in the ways which I have indicated he will consider that he has very imperfect sensation. Thus you have to consider what you mean by "success." The amount of return of motion or of restoration of sensation which you may get in suture of one nerve may not spell success in another at all. A man came here with a divided ulnar nerve. He was a cabinet-maker and in his work he had to use fine small nails. He could not afterwards feel these nails properly with the fingers, neither could he handle his work with the same dexterity; consequently he never earned the same wages afterwards. Another man, a bootmaker, divided his median nerve. In making the boots his custom was to fill his mouth with a considerable number of small nails which he pushed out with his tongue and then snatched them rapidly from his mouth and used them. He was never able to do that work again, because he could not properly feel the nails with his fingers. He said he earned such small wages afterwards that although his nerve had united fairly well he had to give up his occupation. So you see that although a man may have restoration of sensation and some restoration of power the question whether he has a really satisfactory return of the part to a useful condition depends very much upon what work he has to do, and you have to keep this in mind in telling people what sort of results they may expect from an operation which perhaps you have recommended.

I now want to say something about the next difficulty which arises in secondary suture, and that is the difficulty which sometimes occurs in consequence of the nerve ends being so far separated that they cannot be approximated. A man came to this hospital about 10 years ago who had a

swelling in his median nerve just below the elbow. It caused great pain in his hand and a considerable impairment in the movements of the hand muscles. I cut down upon it and found that there was a thickening of the nerve at this place and that there was what you may call a diffuse fibroma in the nerve. I cut away, as far as I could, what appeared to be the unhealthy tissue, but it was not satisfactory because, unlike most neuromata, there was no definite capsule or sheath to this tumour and there was not what you could call a definite tumour at all; it was rather a condition of fibrosis. However, I did what I could to save the nerve and sewed the wound up. There was a little improvement, but in a few months the man came back as bad as he had been before, and the pain was so great that he could not do his work, he could not handle anything, and his hand was practically useless. Recognising that if I operated upon and cut away the diseased part of nerve I should be unable to bring the two divided ends together, I had a rabbit killed in a neighbouring room to the operating theatre and at the time that I began the operation, and whilst I was dissecting out the median nerve from the scar tissue someone else opened up the spinal canal of the rabbit and took out the cord and then opened up its leg and took out the sciatic nerve. The sciatic nerve is a very small thing in the rabbit, and so I took both its sciatic nerve and its spinal cord and put them in together between the two ends of divided median nerve, which were about three inches apart. The wound ran a perfectly aseptic course and there was no difficulty about its healing. First of all the man lost all his pain, as one would expect after cutting away the nerve which was the seat of pain. Next he had a pretty rapid restoration of sensation, so that within a few months he had a hand which was useful for his work. He had good tactile sensation and could perceive touch in all parts of the area supplied by the median nerve. His muscles had been much wasted before I finally operated upon him, but afterwards they never became materially restored. They were slightly larger, so that I thought sometimes I could detect slight movements of the muscles supplied by the median nerve; but I could never be quite sure that that man got restoration of muscular power.

In some other cases of nerve grafting which have been recorded the results have been more satisfactory and sensation has returned and power has been restored. I think that the chief drawback in the operation in which I used the rabbit's nerve was that I did not have a large enough animal killed. If I had to do the operation again I should take the nerve of, say, a dog or a sheep.

Now, supposing you are doing an operation, and you come to a condition in which you divide or take away a piece of nerve and cannot get the ends together, you will not, of course, have rabbits, sheep, or dogs waiting for you. What are you going to do, then, at the time of operation? You may do one of two things: you may leave the ends wide apart and subsequently, within the next two or three days, obtain the necessary animal, kill it, and take some of its nerve, or at the time you may split a part of the nerve and turn a piece of the split nerve down so as to bridge over the gap. I have never done that myself and I do not think that I should consider it very satisfactory, but it has been done and success is alleged to have followed the procedure.

PARTIAL DIVISION.

Partial division of a nerve is much less common than is complete division in civilian practice, but partial division of nerve by bullets in warfare is exceedingly common. As a rule, in cases where a nerve is evidently partially divided, where some of the muscles supplied by it are paralysed and some are not, while some part of the skin supplied is anæsthetic and some is not, in those circumstances you may generally look forward to a restoration of the nerve without any operation being undertaken for the suture of it. So partially divided nerves, as a rule, do not need to be operated upon, and if you can demonstrate to your satisfaction that perhaps the greater part of a nerve is not divided you may leave to nature and to the tissues themselves the healing of the divided fibres, remembering that if a nerve is partially divided the part which is not yet cut through holds the nerve ends together quite as well as any suture you could employ. And in proportion as you think that nearly the whole of the nerve is divided, so you will entertain the question of operation to repair the injury.

CONTUSIONS.

With regard to contusions it is remarkable to notice what complete paralysis may follow a mere contusion of nerve and how long the part may remain paralysed. Some years ago a boy was admitted here having been run over and having injured his upper arm. When he came in he had complete paralysis of the parts supplied by the musculo-spiral nerve. This paralysis persisted, so that at the end of a month it was still complete. But it was noticeable that at the end of a month, although the motor paralysis was complete, there was some definite sensation in the skin supplied by this nerve and more sensation than there was soon after the injury. A fortnight later there was no return of muscular power at all. In those circumstances the surgeon cut down upon the nerve to see whether it was cut in two by the contusion, which possibly might have crushed it against the humerus and broken it into two halves. He found that it was perfectly normal—indeed, as normal as a nerve could be. It showed no evidence of contusion and to the naked eye it looked perfectly healthy. I have no doubt that its nerve tubules had been broken inside its sheath. But they mended very quickly and well, and in the course of another month, that is to say two and half months altogether, the boy had perfect restoration of the muscles which were supplied by this nerve and which had been paralysed.

Let me tell you of a case in which a member of our profession had an injury to his median nerve in dislocating his forearm. The nerve must have been violently stretched and he immediately had complete paralysis of the part supplied by it. At the end of eight or nine months the parts were still as much paralysed as they had been soon after the accident and the application of electricity did not seem to improve matters materially. But, on the other hand, there was more sensation than there ought to have been in a part the nerve of which was completely divided and I therefore advised him not to be in a hurry but to be patient, to go on with the massage and galvanism, to keep the part warm, and to use the hand. These cases, I told him, sometimes took a long time to recover and you know that a nerve which is divided, even if it is immediately sutured, may take at least a year before muscular power is restored. But in this patient there was one day a slight return of power in the long flexor of the thumb. I hailed this as satisfactory and in the course of a few weeks from that time he began to get rapid restoration of power in the other muscles, though it was nearly a year from the time of the contusion before he had completely recovered. Now, in both of these cases there was so much sensation retained that it was almost certain the nerve could not be completely cut across. And because of this one felt inclined to say that there was no necessity to do an operation, for if the nerve tubules were only torn inside the sheath nothing could be gained by operation.

And now, in conclusion, let me try to sum up for you the chief facts as to treatment which I have put before you. In the first place, nerves do mend in many respects as well as do other tissues of the body and, after a preliminary degeneration regenerative changes ensue in the peripheral end and are more complete in the sensory than in the motor fibres. On the other hand, you must not expect a too complete restoration of muscular power or of sensation, especially in the case of nerves supplying the hand. As far as the treatment of these wounds is concerned primary suture is the thing to aim at in all cases and when a primary suture has been undertaken and successfully carried out, and the wound has healed by first intention, in those circumstances you may rest assured that the nerve will unite, and it will unite all the more quickly if you take care to keep the part in use, to keep it warm, to have it massaged, and, if necessary, to have it galvanised. It will surely unite in time, and the more quickly if the patient be young. Dissuade your patient, therefore, from being in a hurry to have other operations done if primary suture has been satisfactorily performed and the wound has healed by first intention.

With regard to secondary suture, it ought to be undertaken in every case where in a punctured wound a nerve appears to have been either completely divided or so nearly divided as to make it probable that it has been materially injured and may, perhaps, be really divided. In undertaking the operation of secondary suture do not encourage your patient too much if the interval between the injury and the secondary suture is a very long one. My experience is that up to two years you may reasonably expect in the young a good restoration of sensation and

muscular power. But after an interval of four years no one has ever yet recorded a case in which there has been complete restoration of motor power, although there have been cases of restoration of sensation. When you undertake these operations for secondary suture, therefore, remember that to some extent your prognosis is to be guarded, and in giving it you must be guided by the length of time which has elapsed and to some extent by the age of the patient and the particular nerve which is injured. You may give a much better prognosis, from the patient's point of view, in cases of wounds of nerves other than those which supply the small muscles of the hand with power and the fingers with sensation.

Five Clinical Lectures
ON
THE CAUSATION AND PREVENTION OF PHTHISIS.

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LECTURE IV.[1]

GENTLEMEN,—I propose to-day to direct your attention to the compulsory notification of phthisis. This and the great question raised by Koch—viz., whether bovine tuberculosis is communicable or not to man—are, in my opinion, the two most important questions connected with the prevention of phthisis and other forms of tuberculous disease. I am strongly of opinion that without compulsory notification it will be impossible to reduce the prevalence of phthisis and other forms of tuberculous disease to anything like the lowest possible attainable limit. If I am right in this opinion it is obvious that the compulsory notification of phthisis requires the most careful consideration. In this and the following lecture I propose to discuss the arguments for and against this measure in detail.

THE COMPULSORY NOTIFICATION OF PHTHISIS.

The advisability or non-advisability of adopting a compulsory system of notification for phthisis in this country has given rise recently to a considerable amount of discussion. There can, I suppose, be little doubt that the great majority of the profession are, at the present moment, opposed to the proposal. The Local Government Board is opposed to it. The late Sir Richard Thorne, the medical officer of the Local Government Board, and many of the leading members of the profession who have expressed an opinion on the subject have declared themselves strongly against it. Nevertheless, after most careful consideration, I have come to the conclusion that the advantages to be gained from a compulsory system of notification specially adapted for phthisis are far greater than the disadvantages and that such a system ought to be adopted.

I, however, make this statement entirely on the proviso that the object of the "crusade against phthisis" and other forms of tuberculous disease is not merely to reduce in some degree the prevalence of tuberculous diseases, but is to reduce the prevalence of these diseases to the greatest extent attainable by means of our present methods. If the object is merely to do what is possible to reduce the prevalence of phthisis in a way which is easy and agreeable, but which I venture to think would be very inadequate and very inefficient, then I admit that the compulsory notification of phthisis is not necessary and consequently not advisable. But if the object is to make a determined and vigorous effort to reduce the prevalence of the disease to the greatest extent attainable by our present methods then I maintain that some system of compulsory notification is essential, for without compulsory notification it is, I believe, impossible to take effective measures to prevent the tubercle bacillus being conveyed from one human being to another human being. I may add that unless measures are taken to stamp out bovine tuberculosis it will, in my opinion, be impossible (granting that bovine tuberculosis is communicable to man) to prevent tubercle being conveyed from the bovines (through milk) to man; in other words, it will be impossible to prevent the development in man of tabes mesenterica and the other forms of tuberculous disease which are due to the ingestion of tuberculous milk. Further, if it be granted that compulsory notification will materially aid us in our efforts to reduce the prevalence of phthisis and other forms of tuberculous disease to an extent which is impossible without some system of compulsory notification, then I am of opinion that the advantages to be gained from it are far greater than the disadvantages (large expenditure of money, worry and irritation, hardships on some individuals suffering from phthisis, &c.) which it would entail.

The benefit which would result to the human race from the complete eradication of phthisis is so enormous that it is difficult to estimate it. Phthisis is the most widely prevalent and fatal disease to which the human race is liable. In England and Wales alone considerably more than 40,000 deaths are registered every year from phthisis. Dr. A. Newsholme has estimated that between the ages of 15 and 55 one-fourth of the total number of deaths is due to phthisis. Dr. Hermann Biggs even goes so far as to state that more than one-half of the entire adult population at some time in life acquire the disease. In this country phthisis causes more deaths than all the other contagious and infectious diseases lumped together. Further, the great majority of the persons who die from phthisis are adults, whereas a large proportion of the patients who die from the contagious and infectious diseases scheduled, or included with the consent of the Local Government Board, under the Infectious Diseases (Notification) Act of 1889, are children. Again, as all of us know only too well, some of the victims of phthisis are amongst the best and brightest of the race—the very "salt of the earth"; our phthisical patients include some of the most useful and valuable lives in the community, or, if they had not been prematurely cut off, some who would have been most valued members of the community. Further, it must be remembered that if we could greatly reduce the prevalence of phthisis we would do a great deal to reduce the prevalence of other forms of tuberculous disease, for the sputum of phthisis is by far the most important medium through which the tubercle bacillus and its spores are conveyed from one human being to another human being. Keeping, then, these facts and statements in view let us consider the arguments which have been advanced against the compulsory notification of phthisis and the advantages which would result from it.

The first argument against the proposal is that the compulsory notification of phthisis would involve the divulging of a medical secret and that the public would not accept the proposal without protest and resistance. This objection is urged by the special commission appointed by the Académie de Médecine in Paris to report on the prophylaxis of tuberculosis. The commission recalls the fact that phthisis is not a disease that can be classed with the infectious diseases such as diphtheria and small-pox, but that, in the estimation of the public at least it has a hereditary as well as an infectious aspect and as such it is a disease the incidence of which should not be noised about beyond the family circle.

This objection seems to me to be a sentimental rather than a practical one. If the compulsory notification of phthisis will materially aid us in our efforts to reduce the prevalence of phthisis and other forms of tuberculous disease this argument should, I think, be disregarded. It must be remembered that under a judiciously conducted system of compulsory notification, such as the New York system of notification for phthisis, no undue publicity would be given to the fact that a member of a particular family was affected with tubercle. Further, this argument lays far too much stress on the hereditary nature of phthisis. Heredity is merely a predisposing cause; it is, practically speaking, never the sole or the direct cause of phthisis. Consequently, if the public once thoroughly understand, as they ought to be made to understand, that in persons who inherit a hereditary predisposition to phthisis the development of the disease can (usually) be prevented provided that proper precautionary measures are carried out, and if it can further be shown that the compulsory notification of the disease would enable these precautionary measures to be much more effectually carried out than would otherwise be the case this objection falls to the ground. Again—and this is a weighty argument against this objection—the public

[1] Lectures I., II., and III. were published in THE LANCET of July 5th (p. 6), 12th (p. 61), and 19th (p. 132), 1902, respectively.

in this country have already consented to the notification of the infectious and contagious diseases scheduled under the Infectious Diseases (Notification) Act of 1889—in other words, they have already consented that "the medical secret," if it should be so termed, should be divulged in the case of these diseases. Consequently if they (the public) can be convinced that compulsory notification is necessary and advisable for the prevention of phthisis they will not allow the argument that such notification involves the divulgence of a so-called "medical secret" to stand in the way.

The next argument which has been advanced against the compulsory notification of phthisis is that phthisis is a disease which was not included in the Infectious Diseases (Notification) Act of 1889 and that it was not intended that it should be included in that Act. It is pointed out that the special characters on account of which the contagious and infectious diseases which are scheduled under that Act (or which have since, with the consent of the Local Government Board, been included at the request of many local authorities under the Act), were made notifiable are not characteristic of phthisis. These characters are: (1) that they (the infectious and contagious diseases) are acute in their course and short in their duration; (2) that their infective stage is short; (3) that during their infective stage the physical condition of the patients who are suffering from them renders confinement necessary, and that during the later stage of short convalescence, when they are still infective, the patients are quite willing to continue in confinement; (4) that during the course of the disease the patients are usually physically unfit to follow their employments; and (5) that, in the interest of the public (i.e., because of their infectiveness), it is highly undesirable that they (the patients) should, either during the course of the disease or the subsequent convalescent stage, follow their employments. Whereas in phthisis, not only is every one of these conditions absent, but, on the contrary, precisely opposite conditions are present—viz., (1) the course of the disease is usually chronic and the duration often very prolonged; (2) the infective stage is of very long duration, and during a long term, it may be of years, there is no reason, other than their ejecting infective sputa, which can be urged for placing phthisical patients under any control or restriction; (3) the physical condition of phthisical patients does not, until the later stages of the disease, render their confinement to the house or to bed necessary and the patients would therefore not be willing to submit to such confinement; (4) until the later stages of the disease the patients are usually able to follow their employments; and (5) for their own sakes, and for the sake of their wives and families (i.e., in order that they may earn their livelihood and be able to place themselves in the best position for curing or arresting the disease and be able to support those who are dependent on them), it is desirable that they should continue to follow their employments as long as possible.

These differences, with perhaps the exception of the last, are, of course, admitted. I say with perhaps the exception of the last since it is highly desirable, more especially so far as their own health is concerned, that in the early and curable stage of the disease phthisical patients should not continue to follow their employments, but should, for a time at least, be placed in sanatoriums in order that they may be treated in the best possible way and in order that they may be instructed as to the measures and precautions which it is necessary to take both for the treatment of the disease and for the prevention of the extension of the disease to other members of the community and thoroughly trained as to the manner and methods of carrying out those precautions. The last is a most important point. If every patient suffering from phthisis could be placed for a few weeks in a well-regulated sanatorium the benefit which would result, both to the patients themselves and to the community as a whole, would be incalculable. But the existence of these differences is surely not an argument against the compulsory notification of phthisis. It surely does not necessarily follow that because of these differences the compulsory notification of phthisis is not advisable. And it surely does not follow that because phthisis was not included under the Infectious Diseases (Notification) Act, 1889, and because when that Act was passed it was not intended that it should be included under that Act, that with our increased knowledge of the curability and preventability of the disease and that *now*, when we are all agreed as to the necessity for more vigorous preventive action, it should not be included either under that Act, (1) provided that the action (the preventive measures) which would follow on such notification were restricted and modified in accordance with the special peculiarities of phthisis and in accordance with the differences which obtain between phthisis and the infectious and contagious diseases scheduled under that Act; or (2) under a new Act based upon the special peculiarities of phthisis and (I suggest) entitled the Compulsory Notification Act for Phthisis. The existence of these differences undoubtedly shows that phthisis should not be included under the Infectious Diseases (Notification) Act for the same reasons, or rather with the same objects, that the diseases under that Act were made notifiable; but it does not prove that phthisis should not be made a notifiable disease for other reasons and with other objects. Further, it, of course, naturally follows because of the existence of these differences that if phthisis were made a notifiable disease the action to be taken as the result of such notification must necessarily be very different from the action which it is necessary to take in the case of the infectious and contagious diseases scheduled under the Act of 1889.

The whole question seems to me to resolve itself into this: Will the compulsory notification of phthisis materially aid us in the prevention of phthisis and other forms of tuberculous disease? and if it will materially aid us towards this end—and, in my opinion, there is no doubt whatever that it would do so—are the disadvantages which would result from, and the objections to, a compulsory system of notification specially adapted to the peculiarities of phthisis sufficiently great and sufficiently well founded to overbalance the advantages and to negative its adoption? The advocates of the compulsory notification of phthisis have therefore to show: (1) that the compulsory notification of phthisis would be beneficial; (2) that it is possible to formulate a system of compulsory notification for phthisis which would both be effective and which would work well in practice; and (3) that the advantages which would result from such a system of compulsory notification are greater than the disadvantages which would result from it.

The object of the compulsory notification of phthisis and the advantages to be gained from it.—The object of the compulsory notification of phthisis is not, as in the case of the majority of the infectious and contagious diseases included under the Act of 1889, to restrict the liberty of the patients, to isolate them in their own homes, or to send them to hospital (though in a small proportion of cases, in which the patients are a distinct source of danger to the community and especially to the healthy persons with whom they are in immediate contact, this is, in my opinion, desirable and advisable).

The objects of the compulsory notification of phthisis are, I take it, to locate the cases at the earliest possible stage of their development (i.e., as soon as they come under medical observation) and to get full and accurate information as to the individual members of the community who are suffering from phthisis, the localities in which the cases occur, the rooms and houses in which the patients dwell, the trades which they follow, and the workshops, &c., in which they are employed. This information is necessary for the following purposes:—

1. By its means any marked and obvious insanitary conditions in the rooms, houses, workshops, or localities in which patients suffering from phthisis live and work and in which cases of phthisis occur may (so far as this is practicable and so far as the removal of such insanitary defects falls within the sphere of action of the sanitary authority) be removed.

2. The phthisical patients and the persons with whom they are in close contact (their wives, families, &c.) may by this means be informed and instructed as to (*a*) the general sanitary measures (ventilation, cleanliness, &c.) which should be employed in order to promote the cure of their disease, and as to (*b*) the special means (precautions) which should be employed in order to prevent the extension of the disease to the persons with whom they are in immediate contact (their wives, families, &c.), and to the community at large. As Dr. J. Niven has pointed out, "When you know where the cases actually are you can make arrangements for a continued and persistent course of education (and, I would add, therapeutic and preventive measures) at those points at which they are certain to be useful." In this way the poorer[2] phthisical patients would be placed

[2] I say the poorer patients because in the case of well-to-do patients such instruction is unnecessary, since it would certainly be given by the medical attendant and since such advice and instruction would, in the great majority of cases at least, be at once acted upon.

in a better position than they otherwise would be for promoting the cure of their disease and preventing the extension of the disease to others. Consequently a system of compulsory notification would not only be of great importance as a means of preventing the extension of the disease to the unaffected members of the community but would be of great value to the patients themselves.

3. The (poorer) patients affected with phthisis may, under this plan, be supplied (at the expense of the sanitary authority) with the necessary appliances for the destruction and disinfection of their sputa (sputum-bottles and disinfectants).

4. The rooms and houses in which the disease develops and in which cases of phthisis recur (the phthisical centres) may be detected and, if necessary, disinfected. It is important to remember that the poorer class of patients affected with phthisis are very migratory and that without some system of compulsory notification it is in many cases quite impossible to ascertain the rooms, houses, and places in which the disease, as it undoubtedly is in some instances, is contracted. I do not say that a system of compulsory notification would enable us to locate the place of origin of the disease in any but a certain (and possibly only a comparatively small) proportion of cases, but it would certainly enable us to locate the phthisical centre in which the disease was contracted in some cases and such information would be of very great value for the purpose of prevention. Further, it is absolutely impossible to obtain this information in any other way. A system of voluntary notification, which has been advocated by many leading authorities, would, in my opinion, be, comparatively speaking, of very little use. Voluntary notification, which is, after all, merely a makeshift and a compromise, would, in my opinion, be most inadequate and unsatisfactory. As compared with compulsory notification it seems to me to be a mere trifling with the subject.

5. The sanitary authority may, on the death or removal of phthisical patients (but only in those cases in which the assistance of the sanitary authority is demanded by the medical man in attendance or in which independently of such demand there is good reason to suppose that such rooms are definite phthisical centres), take the necessary measures (either at the cost of the ratepayers or of the owners[3] of the property) to purify, disinfect, renovate, and put into a good sanitary condition rooms and houses which are contaminated with the tubercle bacilli. It seems to me (1) that it is only by means of some system of compulsory notification that the phthisical patients and phthisical centres can be located, at all events in anything like a complete way; and (2) that unless full and accurate information is obtained on these points that it is impossible to carry out in anything like a thorough and satisfactory manner many of the preventive measures which are essential in order to protect efficiently the healthy members of the community from the disease, and in order to endeavour to reduce the prevalence of phthisis to the lowest attainable limit.

Up to this point there will probably be no great difference of opinion amongst those who, like myself, are in favour of a compulsory, as opposed to a voluntary, system of notification for phthisis. As to the advisability of the next two headings, which involve giving to the sanitary authority compulsory powers to *insist* that the necessary preventive measures are satisfactorily carried out and to remove dangerous cases of the disease to hospital, there can, I think, theoretically, be no doubt, for such measures would be of immense value if they could be carried out, and are, theoretically at least, the logical sequences of any system of compulsory notification.

6. By the system proposed the sanitary authority and the medical officer of health may, when their assistance and intervention are demanded by the medical man in attendance,[4] see, so far as this is practicable and so far as their authority will allow, that these preventive measures (destruction or disinfection of phthisical sputa, attention to free ventilation, cleanliness, the non-accumulation of phthisical dust, &c.) are carried out.

7. The sanitary authority may remove to hospital those phthisical patients who, because of either (*a*) the insanitary nature of their surroundings (overcrowding, &c.) and the advanced stage of their disease, are unable to carry out the necessary precautionary measures, or (*b*) because of the insanitary nature of their surroundings and their refusal to carry out the necessary preventive measures, are a distinct source of danger to the persons with whom they are in immediate contact and to the community at large.

That these measures would, if they could be effectively carried out, without imposing undue hardships and burdens upon the phthisical patients themselves and upon the healthy members of the community, be of the greatest value in preventing the extension of the disease, everyone will, I suppose, allow. The only debateable questions are: whether it is the business of the sanitary authorities to undertake all of the duties indicated above for the prevention of phthisis; whether they have the power to do so; whether it is advisable that they should do so; and whether the advantages to be gained by a judicious system of compulsory notification specially adapted to phthisis would be greater than the disadvantages. In short, the question seems to me to resolve itself into this: Is it possible to devise a system of compulsory notification for phthisis which (1) would be effective and which would work well in practice; which (2) would not unduly restrict the liberty of the public and of the patients affected with phthisis; which (3) would not be attended with intolerable worry and annoyance to the community; which (4) would not place unjust and unjustifiable hardships upon phthisical patients; which (5) would not do any positive harm, for it is argued that the compulsory notification of the disease would prevent patients suffering from early phthisis placing themselves under medical treatment and so would be harmful; and which (6) would be worth the heavy expenditure which it would necessarily involve?

Another argument which has been advanced against the compulsory notification of phthisis is that phthisis differs from the infectious and contagious diseases scheduled under the Act of 1889 in the important fact that the infection, instead of being, as in the case of those diseases, almost entirely beyond the control of the affected persons, is all but limited to the sputa, the disposal of which can easily be controlled by the patient. It is consequently suggested that there is no need for the compulsory notification of phthisis, or, at all events, that the compulsory notification of phthisis is less necessary and less advisable than the compulsory notification of the contagious and infectious diseases scheduled under the Act of 1889.

But surely the very contrary is the case. Surely the facts (1) that the infection of phthisis is, except in a comparatively small number of cases, limited to the sputa[5] and (2) that this source of infection can in most cases (provided that the patient will carry out the necessary measures for the destruction or disinfection of the sputa) be easily controlled constitute one of the strongest arguments which can be advanced in favour of the compulsory notification of the disease. I desire to emphasise as strongly as words can do the importance of this point. In the case of most of the infectious and contagious diseases included under the Act of 1889 the manner in which the poison is given off from the bodies of affected persons and distributed makes it infinitely more difficult to destroy the poison and to prevent the infection being conveyed to healthy persons who are brought into contact with the patient than it is to destroy the poison of phthisis and to prevent the poison of phthisis (the tubercle bacillus and its spores) being conveyed to healthy persons. And, further, the susceptibility of the great majority of healthy persons who are not immune (i.e., protected by a previous attack of the disease or by vaccination, as in the case of small-pox) to the virus of every one of the diseases scheduled under the Act of 1889 is much greater than the susceptibility of the great majority of healthy persons to the poison of phthisis (the tubercle bacillus). In other words, provided that one can locate a case of phthisis, it is a simple and easy matter, if the necessary precautions and preventive measures are carried out (and these precautions and preventive measures are simple and easy to carry out), effectively to prevent the further extension of the disease, but in the case of most of the infectious and contagious diseases scheduled under the Act of 1889 it is

[3] In New York the owners of the property are obliged, within a certain time after receiving notice from the sanitary authority, to renovate the contaminated property if called upon by the sanitary authority to do so.

[4] The reason for this important qualification will be explained later.

[5] That is, those cases in which there is tuberculous disease of the intestine and diarrhœa, tuberculous disease of the urinary tract with the presence of tubercle bacilli in the urine, and tuberculous disease of bones and joints with discharges containing the tubercle bacillus.

(unless the patient is carefully isolated during the whole period of infection) a very difficult or impossible matter to prevent the further extension of the disease. In short, phthisis is a far more preventable disease than any of the diseases scheduled under the Act of 1889. This fact—the fact that the poison of phthisis can be so easily dealt with and controlled—is, I maintain, a very strong argument in favour of the compulsory notification of the disease.

Another argument against the compulsory notification of phthisis is that the disease is difficult to diagnose in its early stages and that many cases do not present themselves for diagnosis until the disease has been in existence for some time; consequently, that a compulsory system of notification would be too late to be effective, for it would not enable us to prevent the distribution of the poison in the early and unrecognised stage of such cases. This argument undoubtedly shows that it would not be possible by means of compulsory notification *alone* completely to eradicate and to stamp out the disease. But compulsory notification, in conjunction with the other measures which I have advocated, would nevertheless, I maintain, enable us to diminish the prevalence of the disease in a degree which it is impossible to do without compulsory notification.

Whether phthisis could ever be completely eradicated by any means which we at present have at our disposal may well be doubted, but that its prevalence can be enormously reduced if effective measures of prevention are employed is, I think, certain, and amongst these means I place in the forefront the compulsory notification of the disease. Further, if such diseases as measles and whooping-cough should be notified (and although they were not originally included in the Act of 1889, they have, with the consent of the Local Government Board, been included by the request of some local sanitary authorities under that Act), surely phthisis should be notified. In the case of measles and whooping-cough the poison is given off from the bodies of affected persons in the earliest stages of the disease and susceptible persons with whom the patients are in contact are usually infected before the nature of the disease is suspected or recognised. In the case of these diseases the only effective means by which the poison can be controlled even after the disease is recognised is strict isolation. Further, persons who are not immune in consequence of having already suffered from the disease are highly susceptible to the poison of these diseases and almost always contract the disease when exposed to infection. But in the case of phthisis, although the poison may be given off before the patient comes under observation and before the nature of the disease is recognised, the amount of the poison which is given off in this way is, comparatively to the amount which is given off in the later stages of the disease—i.e., after it is diagnosed and recognised—very small. Further, the virulence of the poison, or rather, perhaps, I should say the susceptibility of healthy persons to be affected by the poison (i.e., to contract the disease), is, comparatively speaking, slight. Again, and this is the most important point, after the nature of the disease (phthisis) has been recognised the infection can be readily and easily controlled. The compulsory notification of such diseases as measles and whooping-cough is, consequently, in comparison with the compulsory notification of phthisis, of infinitesimal value for the purpose of prophylaxis. Hence if measles and whooping-cough should be notified (but from this statement it must not be supposed that I advocate their notification) *a fortiori*, other objections being for the moment left out of account, phthisis should be notified. Further, as Dr. Newsholme has pointed out:—

> The last Factory and Workshops Act contains a clause securing the compulsory notification of anthrax, phosphorus and arsenical poisoning, and of a chronic disease like lead-poisoning occurring in connexion with industries. Each of these has an annual number of victims that could almost be counted on the fingers, while thousands of the artisans of this country annually fall victims to phthisis acquired in connexion with their special work. But lead-poisoning must be notified, phthisis is ignored. The non-communicable disease must be notified, the communicable disease is left to carry out its maleficent work.

The next objection to the compulsory notification of phthisis is the difficulty of ascertaining how far practical measures for the prevention of the disease can be supplied as the result of such notification. It is pointed out that the advocates of compulsory notification are not agreed as to the action which should be taken as the result of such notification. Some would limit this action to the diffusion by means of leaflets, &c., of knowledge as to the precautionary measures (destruction of sputum, &c.), which it is advisable that phthisical patients and the persons with whom they live should take in order to prevent the extension of the disease. Others would extend this action to the periodical inspection, by special officers appointed by the local authority, of the houses, workshops, &c., in which phthisical patients live, or to the disinfection of the rooms and houses in which phthisical patients have died. Others, again, advocate the erection by the sanitary authority of sanatoriums at the cost of the rates, of hospitals for the prevention of infection, and so on.

The measures (in addition to the general sanitary measures which everyone is agreed that it is the duty of the sanitary authorities to carry out) which, in my opinion, it is the duty of the sanitary authorities to take in order to protect the healthy public from phthisis, if the object of the "crusade against phthisis" is to reduce the prevalence of the disease to the lowest attainable point, include: (1) the compulsory notification of the disease; (2) the provision, at the expense of the rates, of laboratories for the testing of sputum and other suspected discharges, and of milk, meat, &c., supposed to be tuberculous, and reporting thereon; (3) the removal (so far as it falls within the sphere of the sanitary authority to remove them) of any insanitary conditions which are harmful to patients affected with phthisis or are likely to conduce to the propagation of the disease to those healthy persons with whom they live and work; (4) the diffusion (by leaflets, &c.) of information regarding the nature of the disease, its modes of propagation, and the precautions which should be taken by the phthisical patient and by those with whom he is in close contact in order to prevent the extension of the disease; (5) the provision, at the expense of the rates, of the necessary appliances (spittoons and disinfectants) for the destruction and disinfection of the sputa; (6) the periodical inspection by competent officers, paid for and provided by the rates—but only in those cases in which such inspection is demanded—i.e., considered advisable and necessary by the medical man in attendance—of phthisical patients, their homes and workshops, with the object of seeing, so far as this is practicable and so far as such measures fall within the sphere of the sanitary authority, that the necessary preventive measures are carried out; (7) the removal to a hospital to be provided and maintained by the sanitary authority or by the sanitary authority and by the Poor-law authorities conjointly of those cases of phthisis which are a distinct source of danger to the persons with whom they live and to the community; and (8) after the death or removal of phthisical patients the purifying, renovating, and disinfecting (either at their own cost or the cost of the owners) of phthisical centres—i.e., of rooms and houses which are contaminated with the tubercle bacillus. Everyone will, I suppose, allow that if such measures could be effectively and systematically carried out for a sufficiently long period of time that they would be of the greatest value in the prevention of phthisis and other forms of tuberculous disease. Further, as has been already stated, I maintain that it is impossible, except by a compulsory system of notification, to obtain the information with regard to the location of phthisical patients which is absolutely essential in order that these measures may be carried out in anything like an effective and systematic way.

The next objection is a financial one. Such a system as that indicated above would involve a very large expenditure of money. It would necessitate the payment of notification fees to medical men, the payment of a staff of skilled inspectors and of a certain number of clerks, the erection and upkeep of laboratories for the examination of phthisical sputum, &c., and the erection and upkeep of hospitals for the reception of the dangerous cases of phthisis. But although the financial cost of such a system would for some years be very great, it must be remembered that it would be a rapidly decreasing expenditure; for as phthisis became—as I believe it rapidly would do if these measures were effectively carried out—less and less prevalent the expenditure would rapidly decrease. Nevertheless, the very large expenditure which would for some years be required is a weighty objection. But against this great expenditure the benefits to be derived from such a system of compulsory notification of phthisis have to be placed. If we could reduce the mortality of phthisis from 50,000 per annum in this country to, say, 10,000 per annum—and I maintain that with the aid of such a system of compulsory notification and the preventive measures based thereon which I have

indicated above we may reasonably in the course of time expect to attain this end (provided that at the same time adequate measures are taken to eradicate bovine tuberculosis, granting that bovine tuberculosis is communicable to man), and that without some such system of compulsory notification we cannot possibly hope to attain this end—the result would, in my opinion, abundantly justify the expenditure. In short, the financial argument *per se*, in my opinion, is altogether insufficient to negative the proposal. It must, of course, be remembered that compulsory notification does not necessarily entail subsequent inspection, the provision of laboratories for the testing of sputum, &c., and the provision of hospitals for the reception of the dangerous cases; and that if these measures were not included in the scheme the cost of compulsory notification would be enormously reduced. But, in my opinion, the compulsory notification of phthisis *per se* (without periodical inspection in those cases in which such inspection was demanded by the medical man in attendance, and the provision of laboratories and of hospitals for dangerous cases), though it would undoubtedly be of considerable use—for it would afford much valuable information as to the location of cases of phthisis by means of which the sanitary authority would be able to focus their general sanitary efforts more powerfully than they can at present do upon the points where such efforts are most needed—would be of little use in comparison with the complete scheme which I have sketched out.

ON PUERPERAL APHASIA, WITH AN ANALYSIS OF 18 CASES.

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"PUERPERAL aphasia" is a term which has not yet, so far as I know, found its way into our medical nomenclature, although the classical paper of Poupon[1] on the subject has given it a distinctive significance in continental records. In the following discussion I wish to follow the classification which that author has laid down and to include under the term not only cases of loss of speech occurring during the strictly puerperal period but also cases occurring during the later months of pregnancy. I follow this arrangement not merely because it forms a convenient grouping of cases for discussion, but because underlying it there is a pathological factor which I believe must be taken into account in all cases of aphasia occurring at this time. The factor I refer to is the altered condition of the maternal blood for a certain period before and after delivery and the greater tendency of the blood at this time to undergo clotting within the vessels. I wish at the outset of my paper to lay stress on this point, since it has apparently escaped altogether the notice of Poupon; indeed, in his discussion of the etiology of the affection this author deliberately discards the occurrence of cerebral thrombosis as a factor in the induction of puerperal aphasia. I shall, however, take the opportunity of returning to this point at some length later in my paper.

My attention was first drawn to the subject by the occurrence of a case of typical aphemia in my practice some years ago, the loss of speech taking place during the later months of pregnancy in a woman apparently free from cardiac or other ailment. Full notes were taken of the condition at the time, but I purposely omit all particulars which do not bear directly on the subject in hand.

CASE 1.—A married woman, aged 27 years, with no evidence of cardiac or vascular disease and with a good family history, was suddenly affected with total loss of speech in the latter half of the seventh month of her fourth pregnancy. She retired to bed in her usual health on the evening of Sept. 16th, 1896; on the following morning, after sudden emotional excitement, she lost her speech for a period of about an hour's duration; later in the same forenoon she had a second very transitory loss of speech, this time more gradual in its onset but also passing off in less than an hour's time. At 3 P.M. of the same day embarrassment of speech again manifested itself; the patient was observed to speak more slowly and with increasing difficulty until 9 P.M. when the attack culminated in total loss of speech for the third time. She remained speechless on awaking next morning and when I saw her later in the forenoon I found a condition of complete motor aphasia without agraphia (aphemia). She could not articulate the simplest words, such as "yes" or "no," nor could she repeat them after hearing them pronounced. Yet it was quite evident that she understood everything that was said to her and she was able to make reply either in pantomimic or in written speech. There was no other paralysis on this date although specially looked for; but on the following day (the 19th) I found distinct paresis with loss of sensation in the right upper extremity, most of all in the right thumb and forefinger, while the patient also complained of a numbness at the right angle of the mouth. On this day also the patient had an attack of phlebitis and thrombosis of the smaller veins above the right ankle. Speech returned slowly but surely from about the third day after the attack. At first she could only use the simplest words in common use, and when she could not make herself understood by words, or by words interspersed with pantomime, she resorted to the use of a slate and pencil. In about three weeks she was sufficiently recovered to piece together phrases and small sentences. She read aloud some of Scott's poetry every day, and in this way gradually mastered most of the difficulties of pronunciation. On Nov. 25th (10 weeks after the attack) she was confined of a healthy full-time child. Labour was natural and easy. She still spoke in a slow, hesitating style, and if flurried she stumbled occasionally in her speech, but it could not be said that any relapse in her condition followed delivery. With rest and care she progressively improved, and although she could not speak with her former freedom of utterance for several months she ultimately made a perfect recovery. Coincidently with the improvement in speech the numbness and paresis of the right upper extremity also gradually disappeared. There were no disorders of lactation and there was no evidence of syphilis in the personal or family history. I have already noted the absence of cardiac disease and there was no history of rheumatism. Physical examination elicited nothing apart from the above history. The patient was a person of unusually calm disposition and the element of hysteria could safely be excluded. As to the after history of the case, two years after the above attack the patient again became pregnant. Fearing a recurrence of the aphasia for reasons to be afterwards stated, it was considered advisable to terminate the pregnancy at the earliest possible moment, and abortion was purposely induced at two and a half months. There has been no recurrence of the aphasia and when last I heard of the patient about a year ago she was in the enjoyment of perfect health.

The only other contributions to the subject of puerperal aphasia which I have been able to find are those of Bateman,[2] Leith Napier, and Finlayson[3] in our own country; and those of Lewandowski[4] and Poupon in continental records. It is of course possible that I have overlooked some of the literature on the subject, but at any rate my search has convinced me of the rarity of the disease. Kussmaul in his great work on defects of speech does not mention an instance, nor does Sireday in an analysis of 8000 consecutive cases of labour. At the same time I am bound to say that Bateman in his *résumé* has hardly done sufficient justice to his own countrymen, and he has overlooked at least a couple of most interesting cases which I have been fortunate enough to find reported by Finlayson. It is only doing Finlayson tardy justice to say that his two cases were not only among the first recorded, but that they also illustrate some of the most salient features of the affection—amongst others, the tendency to recurrence of the aphasia in a subsequent pregnancy. In the accompanying list of 18 cases which I have accumulated in the course of my reading I have endeavoured to set forth the main features of each so far as the literature of the subject has been available to me; in some cases it is to be regretted that the details are somewhat bare. Among the first 12 which are taken from various authors by Poupon several are described in such ambiguous terms ("*troubles de la parole*") that it is doubtful whether or not they are cases of true aphasia. However, I have decided to retain them all here since they have already in a way the impress of Poupon's authority and their inclusion will add completeness

[1] Des Aphasies Puerpérales, l'Encéphale, Août, 1885.

[2] Case of Loss of Speech occurring as a Puerperal Symptom, Brit. Med. Jour., vol. i., 1888, p. 237.

[3] Clinical Lecture on Loss of Speech, Glasgow Medical Journal, September, 1879.

[4] Quoted in Brit. Med. Jour., vol. ii., 1879, p. 582.

TABLE GIVING ANALYSIS OF 18 CASES OF PUERPERAL APHASIA.

No. of case.	Author.	History of attack.	Remarks.
1	Poupon.	The patient was a woman, aged 24 years. Second confinement; the labour was easy; on the second day after delivery there was loss of speech with right hemiplegia; word-blindness but no word-deafness. Gradual recovery.	The lesion was attributed to embolism of the left Sylvian artery. There were mitral disease and a history of rheumatism.
2	Burrows.	Six weeks after confinement there were embarrassed speech and impairment of memory. Death.	Embolism of the left middle cerebral was found post mortem, also mitral and aortic disease.
3	Ireland.	Seven days after confinement there was loss of speech; albuminuria. Sudden death.	Softening of the left hemisphere was found post mortem due to vascular lesion.
4	Charpentier.	There were left hemiplegia and loss of speech with transitory deafness following accouchement at term; slight albuminuria. Recovery in 44 days.	Attributed by Charpentier to septicæmic accidents and by Poupon to vascular lesion.
5	Churchill.	Eight days after accouchement there was paresis of the face and the arm; loss of speech. Partial recovery of speech after two months.	Attributed by Churchill to albuminuria and by Poupon to vascular lesion.
6	Darcy.	The patient was a woman, aged 27 years. Two days before confinement there were right hemiplegia and loss of speech; albuminuria. Partial return of speech two days later and disappearance of the hemiplegia eight days later.	Attributed to "cerebral congestion."
7	Cuffer.	The patient was a woman, aged 36 years. Some days after confinement and without apparent cause left hemiplegia and aphasia supervened with coincident lacteal derangements. Rapid recovery.	Vascular lesion following anæmia (?). The patient was "left-handed."
8	Mattei.	The patient was a woman, aged 34 years. There was abortion with considerable hæmorrhage at the fifth month; three days later there were numbness of the left leg and inability to make herself understood, the attack lasting one hour; two days after this another aphasic attack occurred which disappeared on the removal of a large fecal mass from the lower bowel.	Attributed by Mattei to anæmia or to a reflex disturbance, and by Legroux to uræmia.
9	Leven.	The patient was a woman, aged 18½ years. In the seventh month of pregnancy, following emotion, there were sudden loss of consciousness and paralysis of the right side, first of the leg and later of the arm; three days later there was loss of sensation; again three days later there was loss of speech. Slight improvement occurred after the confinement. During the second pregnancy there was loss of speech lasting for 15 days. Paralysis after delivery.	Attributed by Leven to hysteria. Note the recurrence of aphasia in the subsequent pregnancy.
10	Leith Napier.	There was loss of speech 17 days after confinement (the delivery was natural and easy); cramping pains in calf of leg; the temperature was normal; three days later partial paralysis and again two days later complete hemiplegia. Progressive recovery.	Attributed by Leith Napier to cerebral embolism and by Poupon to nervous origin; no cardiac disease.
11	Gignoux.	In the sixth month of the first pregnancy there was sudden aphasia lasting half an hour and then passing off completely; natural confinement at term. In the eighth month of the second pregnancy an attack of aphasia occurred lasting for 20 minutes, and passing off as suddenly as it appeared.	Attributed by Poupon to "nervous" origin. Note the recurrence of aphasia in the subsequent pregnancy.
12	Gignoux.	The patient was a woman, aged 24 years. At the second pregnancy (at term) forceps were applied on account of uterine inertia; on the second day after delivery there was turgescence of the breasts but no fever; on the same evening sudden loss of speech occurred without unconsciousness. Gradual improvement next day and after two and a half months complete restoration of speech.	Attributed to nervous origin by Gignoux Poupon suggests anæmia as a possible alternative cause.
13	Finlayson.	The patient was a woman, aged 32 years. Second confinement, followed 10 days after delivery by complete aphasia and slight paresis on the right side. Partial recovery from aphasia at the age of 35 years. The third confinement was followed by complete loss of speech and numbness and paresis of right hand, but no agraphia. Aphasia was persistent.	There was no cardiac lesion. Note the recurrence of aphasia in the subsequent pregnancy.
14	Finlayson.	The patient was a woman, aged 37 years. Ninth confinement (natural labour), followed three weeks later by aphasia and right hemiplegia. The aphasia passed off in a few days and the hemiplegia in three weeks. At 39 years of age the patient was confined for the tenth time (labour tedious), followed suddenly on the twentieth day by complete aphasia and marked hemiplegia of the right side. Aphasia persistent and ensuing rigidity of paralysed limbs.	There was no cardiac lesion. Note the recurrence of aphasia in the subsequent pregnancy.
15	Lewandowski.	The confinement was followed on tenth day after delivery by sudden loss of speech without unconsciousness. Next day she could say "No"; and there was gradual recovery of both speech and writing after three days.	The attack was transitory.
16	Lewandowski.	The confinement (labour difficult) was followed on the ninth day by rigor, headache, pyrexia, and slight tetanic convulsions; about the thirteenth day there was loss of speech but the patient was still conscious and was able to move her limbs and tongue freely. Death on the seventeenth day.	The necropsy revealed inflammation of the brain and the membranes; in the left anterior convolution a partly decomposed focus of the size of a walnut was found, also several purulent foci in the lungs and suppuration of the veins of the ovario-uterine plexus.
17	Bateman.	The patient was a woman, aged 22 years. At the seventh month of her first pregnancy the patient had some obscure symptoms with embarrassment of speech lasting about a month. Early in the seventh month of her succeeding (second) pregnancy there was paresis of the right arm and the right leg; at the beginning of the ninth month embarrassment of speech was noticed, culminating in complete aphasia six days after delivery which was natural and easy; there was no loss of consciousness; on the eighth day after delivery there was right hemiplegia. Death from exhaustion occurred six weeks after the confinement.	There was neither cardiac disease nor history of rheumatic fever. Note the recurrence of aphasia in the subsequent pregnancy.
18	Sinclair.	The patient was a woman, aged 27 years. In the seventh month of the fourth pregnancy there was onset of total aphasia without agraphia; two days later there was slight paresis of the right arm; phlebitis and thrombosis of veins in the right leg. There were no lacteal derangements. Natural delivery at term. Progressive improvement occurred from the third day and ultimately complete recovery.	There was no cardiac disease or history of rheumatic fever. Abortion was induced in subsequent pregnancy and there was no recurrence of the aphasia.

to my paper. The remaining six cases are narrated by Finlayson (two), by Bateman, by Lewandowski (two), and by myself. I think these 18 instances will be found to afford us sufficient material for the survey of what appears to be a somewhat neglected group of cases.

An examination of the accompanying list of tabulated cases will at once reveal the fact that puerperal aphasia may be due to several causes. Poupon considers these under two broad classes: (1) those due to nervous origin, and (2) those due to vascular origin. Let me say at once that I admit the occurrence of cases due to a nervous dyscrasia such as hysteria or reflex disturbance. It must be borne in mind that during pregnancy the whole mental attitude of a woman often undergoes profound change; she may become fretful or capricious, and in many cases has less control of the emotional faculties. The occurrence of a puerperal aphasia of neurotic origin, therefore, would not be surprising when we remember that a similar loss of speech may occur apart from pregnancy altogether. At the same time I cannot help thinking that Poupon lays too much stress on this factor and there are several cases in his list which he attributes to nervous origin which might, in my opinion, be more fairly accounted for by vascular lesion. Leith Napier's is a case in point. That author attributed the aphasia to cerebral embolism. Poupon disagrees with him, and in the absence of any reported cardiac disease would attribute the case to a neurotic element. It is, however, not my purpose to dwell long on this group of cases, about whose actual occurrence there can after all be little difference of opinion; but before considering the vascular group, which presents many interesting features, I would interpolate the fact that an occasional case of aphasia may follow delivery where pyogenic infection has unfortunately taken place. Poupon was not aware of such an occurrence and it is interesting to rend his disquisition on "*les petits microbes*" in the light of our later knowledge At any rate, the case which I have quoted from Lewandowski disposes effectually of this point; and we may say that the occurrence of a definite aphasia in a pyæmic case following delivery should at once suggest the existence of a fresh focus of the disease in the left cerebral hemisphere. Such an occurrence must, of course, be exceedingly rare.

I shall now consider Poupon's second group—i.e., those due to vascular lesion. These have afforded me much interest in view of the fact that more recent cases materially modify the conclusions which that author has laid down. Passing over those transitory cases which possibly owe their origin to cerebral "congestive attacks," Poupon goes on to consider the relation of the loss of speech to cerebral thrombosis, to embolism, and to hæmorrhage. It has, of course, to be remembered that the child-bearing woman is at an age when the blood-vessels are usually intact and are as yet unaffected by the degenerative changes which make their appearance in the decades following the climacteric. The possibility of cerebral hæmorrhage might therefore be considered remote, unless, perhaps, in the presence of albuminuric complications. Poupon has no hesitation in crediting cerebral embolism as the main factor in the causation of puerperal aphasia and he is inclined to exclude both hæmorrhage and thrombosis from his calculation. It is quite clear that in the case of women suffering from mitral or aortic disease a vegetation might easily during the stress of labour become either wholly or partially detached and so lead sooner or later to the occurrence of cerebral embolism. In the event of the left Sylvian artery intercepting the plug we should find aphasia accompanied by more or less hemiplegia. Such instances have doubtless often occurred and the sequence of events is so clear that I need not labour the point.

But what are we to say regarding a fair residuum of puerperal aphasias in which the blood-vessels show no signs of degeneration and in which there is no cardiac disease, no albuminuria, and no suspicion of the neurotic habit? In these cases I believe the key to the situation lies in the composition of the blood itself and the greater tendency which puerperal women have to the formation of clots within the vessels. I am bound to enter into this point at some detail because Poupon, who alone, so far as I know, has hitherto attempted to treat the subject systematically, is inclined to exclude altogether the occurrence of cerebral thrombosis as a factor in the causation of puerperal aphasia. "*Ce n'est qu'une hypothèse jusqu'ici.*" It will be my object to show that its occurrence is no hypothesis, but that on *à priori* grounds as well as from clinical observation we are fully justified in saying that cerebral thrombosis explains a fair proportion of cases of aphasia occurring both before and after delivery. In the consideration of this question let me first of all point out one important fact, and that is the time of occurrence of the aphasia. A careful scrutiny of the cases in the accompanying table will reveal the fact that with one exception the aphasia in all of them developed either during the four later months of pregnancy or during the period immediately following delivery. Now this period exactly corresponds with that in which numerous analyses of the blood have shown it to be most profoundly altered. The researches of Andral and Gavarret have been epitomised as follows and I am not aware that these conclusions have been disputed by later writers on the subject. "In the earlier months of pregnancy the blood deviates but little from the normal standard. ..... In the later months, however, the blood is characterised by a remarkable diminution in the number of red corpuscles and a considerable increase in fibrin, while the proportion of albumen is somewhat diminished. It would appear, further, that in some cases at least the proportion of white corpuscles is increased. An estimate has been made by the same observers according to which they assume that, if we suppose the average number of red corpuscles in the blood of healthy women who are not pregnant to be represented by the number 125, the average in women towards the end of pregnancy is probably not more than 115 If, in like manner, we take 300 as representing the physiological average of the fibrin, the proportion of that constituent up to about the sixth month may be set down at 250, while from this period onwards during the last three months of gestation it steadily increases in quantity and reaches as high in extreme cases as 480." "These phenomena," adds Lei-hman,[5] "are further interesting in connexion with the occurrence of thrombosis in the pregnant state." "The increase of fibrin and extractive matter in the maternal blood goes far," adds Playfair,[6] "to explain the frequency of certain thrombotic affections observed in connexion with pregnancy and delivery." We may fairly conclude, I think, that on *à priori* grounds the occurrence of a puerperal aphasia due to cerebral thrombosis ought to be regarded as no unlikely contingency.

The results of clinical observation are no less certain. A careful examination of the above list of cases will indicate that many of them presented symptoms undoubtedly referable to a thrombotic lesion. Bateman, in discussing his case (Case 17), says: "From the comparative rarity of the association of loss of speech with the puerperal state I hesitate to venture upon any decided opinion as to the pathology of the above case. The symptoms could scarcely be due to any merely transient cause, for they had existed in a modified form for three months before parturition and became intensified a few days before labour; the absence of any cardiac lesion and the gradual development of the nervous symptoms would rather point to cerebral thrombosis than to embolism." Bastian[7] in his work on Aphasia refers shortly to Bateman's case and throws the weight of his authority on the side of a thrombotic element in some of the cases under consideration. Again, Finlayson takes up quite a decided position on the matter. In a discussion of his own two cases he says: "In neither could we detect evidence of any valvular disease of the heart, neither of them had a history of rheumatic fever; the age of the first woman was 35, and of the second 39; we may, therefore, fairly suppose that the mischief was due to the tendency which puerperal women have to the formation of clots in their vessels and so to the subsequent occurrence of embolism in various forms." Finlayson, therefore, lays stress on the thrombotic origin of the condition, although his remarks leave it to be inferred that the thrombus need not primarily form at the seat of ultimate lesion. The questions of cerebral embolism and cerebral thrombosis are closely correlated in many instances and we may have a small embolism forming the nucleus for an extension by thrombosis. Leith Napier attributed his case to embolism; in the absence of any cardiac disease I am inclined to question whether it was not due to thrombosis pure and simple. In any case the symptoms clearly indicate that the condition was partially, if not altogether, due to the thrombotic element. The

[5] System of Midwifery, fourth edition, vol. i., p. 254.
[6] Science and Practice of Midwifery, ninth edition, vol. i., p. 153. See also Henderson: Observations on the Maternal Blood at Term and during the Puerperium, Journal of Obstetrics and Gynæcology, vol. i., No. 2, February, 1902.
[7] Aphasia and Other Speech Defects, 1898, pp. 118, 119.

patient, 17 days after delivery, suddenly lost her speech; this was followed only three days later by partial, and two days later again by complete, hemiplegia. In the case reported by myself I have no hesitation in attributing the symptoms to cerebral thrombosis. This diagnosis receives support, not only from the mode of onset, from the absence of cardiac disease, and from the condition of the maternal blood at the time, but also from what we may term strong corroborative evidence. I refer to the occurrence of thrombosis in the veins in the lower part of the right leg two days after the onset of the aphasia. Now this thrombosis of the leg took place in the absence of any varicosity of the veins and in spite of the fact that at this time my patient was, according to orders, laid up in bed in the recumbent position. The fact that undoubted thrombosis took place in the venous radicles of the lower limb in circumstances most favourable to a perfect circulation is, I think, good reason to support the inference that a similar thrombotic accident in the cerebral vessels was the determining cause of the aphasia.

There is one further argument in favour of cerebral thrombosis as against embolism. I refer to the recurrence of the aphasia in a subsequent pregnancy—an event of no uncommon occurrence. Now we know that an embolism is prone to effect the left hemisphere more frequently than the right; at the same time it is contrary to all laws of chance that an embolism should be carried to the same spot on the same side of the brain in so many succeeding instances. I think that there is only one inference in regard to the recurrent cases at least—that the first attack of aphasia, whether due to thrombosis or not, left histological changes in the vessel wall which formed a seat of election for the development of another thrombus when the vascular conditions were again favourable to such an accident. I trust, therefore, that I have made it quite clear that in a case of puerperal aphasia the occurrence of cerebral thrombosis is no insignificant factor in the production of the affection.

Before dismissing the etiology of puerperal aphasia I would add that the nature of the labour has no necessary relation to the loss of speech. In many of the cases labour is distinctly stated to have been natural and easy. It is evident, however, that in pyogenic cases and again in cases accompanied by severe hæmorrhage with subsequent anæmia the nature of the labour may contribute indirectly to the occurrence of puerperal aphasia. Sudden emotion seems to be an associated element in several cases. This might conceivably be productive of an hysterical loss of speech, or by causing sudden alteration of blood-pressure encourage the production of an aphasia from "congestive attacks," the detachment of an embolus, or the actual deposition of a thrombotic clot. Poupon and Bateman both seem to lay stress on the coincident troubles of lactation present in several of the cases. Such lacteal derangements might be due to vaso-motor troubles following the cerebral lesions, but I think hardly concern us in discussing the etiology of the subject.

In considering the *prognosis* of puerperal aphasia one has to bear in mind many facts which apply equally to other forms of speech affection. The nature of the lesion, whether functional or organic, nervous or vascular, must be taken into consideration. But looking in a general way at the cases which I have summarised in the table one cannot help being struck with the large proportion of recoveries from a primary attack of puerperal aphasia. In some the loss of speech was of a very transitory type, in others complete or partial recovery ensued in the course of a few days, weeks, or months. I have already pointed out that the age of the child-bearing woman is an important factor in this group of cases, and the vascular conditions are mostly such as to allow of a quick resolution of a thrombus or the rapid opening up of a collateral circulation. A primary attack of puerperal aphasia, therefore, will often lend itself to a more or less favourable outlook. At the same time the table clearly emphasises the liability to recurrence of the aphasia in the event of a subsequent pregnancy. This unfortunate sequence of events took place in both of Finlayson's cases, in Bateman's case, and in the cases of Gignoux and Leven reported by Poupon. Moreover, the second or recurrent attack in each instance was of a much more serious nature than the attack recovered from in the first instance. In both of Finlayson's cases the secondary aphasia remained persistent and in one case was accompanied by permanent rigidity of the paralysed limbs. Bateman's case, without the development of fresh symptoms, terminated fatally in six weeks. A recurrent attack of puerperal aphasia is therefore a serious matter and the prognosis is grave. Indeed, it is so bad that we must consider the question whether it ought to be allowed to occur. Poupon, in recognising the liability to recurrence of the aphasia in a subsequent pregnancy, advises that the woman should be warned to avoid becoming *enceinte* in the future. The cases of Finlayson and Bateman bear further testimony to Poupon's advice. I would go even further and say that in the event of the patient again becoming *enceinte* our only justifiable course, according to present knowledge, is to terminate the pregnancy at the earliest possible moment. Such a procedure was actually carried out in my own case and there has so far been no recurrence of the aphasia.

I need not say much regarding the treatment of puerperal aphasia. This will depend to a great extent on the nature of the lesion and the attack must be dealt with on the same lines as guide us in the treatment of any other cerebral affection. It would be superfluous for me to add anything on this score. In addition to special indications for treatment it will in most cases be necessary to pay attention to the general health of the patient, and when signs of improvement manifest themselves to persevere with the re-education of the faculty of speech. In regard to the latter point I would only insist that the *séances* should not at first be too frequent and that care be taken not to fatigue the patient. In the event of a subsequent pregnancy I have already expressed the view that for purposes of prophylaxis it is strongly advisable to terminate the pregnancy at the earliest possible moment.

Stroud, Gloucester.

ON THE

ACETONE SERIES OF PRODUCTS IN CONNEXION WITH DIABETIC COMA.

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(Continued from p. 145.)

THE source of the acetone series of products is not as yet definitely determined. All are agreed that these products are not derived from carbohydrate. Until lately they have been considered to originate from the nitrogenous grouping of proteid, but during the last three or four years opinion has been changing and doubts have been thrown upon the accuracy of this view. A point to which considerable importance has been attached is that taking into account the amount of carbon contained in oxybutyric acid in comparison with that contained in proteid more carbon may be found to escape in the oxybutyric acid discharged than can be derived from the proteid metabolised as measured by the nitrogen eliminated. Several observers[1] have recently been looking to fat as the source of oxybutyric acid and there is a decidedly growing disposition to adopt this view. The evidence deducible from the research work that has been thus far conducted seemingly points to elimination of the oxybutyric series being influenced by fat ingestion, but at the same time it must be said that a want of harmony is traceable in the results that have been recorded and hence that it is not permissible at present to regard the matter as entirely settled.

In the present state of our knowledge our language upon the point under consideration can only be shaped in a conjectural form. Assuming the acetone series to be derived from the fatty class of bodies, the question that next presents itself is the mechanism by which the result is reached. If the origin took place in a direct manner from free fat it would be reasonable to expect that a constancy of relation between ingested fat and eliminated oxybutyric acid, which is not found to exist, would be met with. If derived from fat existing as an atomic grouping in the protoplasmic molecule analogy may be taken to justify our speaking of its production as a result of faulty metabolism in the following terms.

[1] Geelmuyden, Zeitschrift für physiologische Chemie, Band xxiii., 1897; Schwarz, Archiv für experimentelle Pathologie und Pharmakologie, Band xl., 1898; Waldvogel, Zeitschrift für klinische Medicin, Band xxxviii., 1899; Hagenberg, Centralblatt für Stoffwechsel und Verdauungskrankheiten, 1900; Schuman-Leclerq, Wiener klinische Wochenschrift, 1901; and Grube, Zeitschrift für diätetische und physikalische Therapie, 1902.

Instead of katabolism, or downward metamorphosis, proceeding in an orderly manner to the formation of the normal end products—carbonic acid, water, and ammonia—bodies consisting of final groupings from which no further energy can be extracted, an erroneous shedding from the living proteid molecule of a much higher form of atomic grouping occurs, with the result that latent energy is carried off and wasted through the elimination by the kidney that subsequently ensues. The why and the wherefore of this abnormal cleavage is as yet beyond us to fathom and we can only speak of it as the result of some occult influence brought to bear in connexion with katabolism. It is assumed that there are atomic groupings of different kinds existing in the molecule of living protoplasm and it is conceivable, if fat is regarded as the source of oxybutyric acid, that it is from the fatty grouping that the discharged product is thrown off. When oxybutyric acid is being eliminated another abnormality with regard to it is found to exist. The system loses the power possessed in the normal state of consuming the principle when given by the mouth. It has been found [2] that oxybutyric acid administered even in large quantities becomes lost sight of within the healthy organism. Apparently the system possesses the power of assimilating and thereafter utilising it as it does any other fatty acid. In severe diabetes and in pancreatic diabetes, on the other hand, this power is found to be more or less lost—a circumstance, it may be remarked, which agrees with what is observable in the case of sugar. When sugar is being derived from proteid disintegration the power of assimilating and utilising sugar is contemporaneously lost.

Beyond a little acetone in the urine and a certain amount in the breath the acetone series of products are not met with under normal conditions, but diabetes is not the only abnormal state with which they are associated. Deranged metabolism from faulty nutrient supply seems to be the great general factor concerned in their production. Starvation from whatever cause arising, whether the result of disease or of intentional fasting, is attended with their elimination. They have been recognised in connexion with different diseases of a febrile nature and observation shows that they are more likely to be thus found in children than in adults. Restriction to a proteid and fat diet is also one of the conditions leading to their appearance, and in these circumstances the addition of carbohydrate to the food is immediately followed by their disappearance. Unassociated with diabetes the amount of oxybutyric acid found never runs high. From nine to 10 grammes per diem may be looked upon as constituting an outside quantity and most frequently the amount stands below four or five grammes. In diabetes, as previously stated, the amount may upon occasions reach 150 grammes per diem, or even it may be more than this.

It is mainly as an accompaniment of diabetes that the elimination of the acetone series falls under observation and here it is an event of but too common occurrence. Broadly, it may be said that the disposition in the disease is for the condition to grow into a stage attended with the elimination of the products. In the early stage it is usual for them to be absent. Then as time advances they tend to appear. Progressiveness in this particular is observed to constitute an ordinary feature of the disease. At first the fault is limited to defective assimilative power over the carbohydrates of food. These fail to be put into a fit position for utilisation through, it may be considered, constructive metabolism in connexion with them not being properly carried out. If we are correct, as there is reason to believe we are, in attributing the production of the acetone series of principles to a faulty downward metabolism, the morbid state, when their elimination is taking place, may be looked upon as having extended so as to involve both the upward and downward processes in error, thereby producing the "composite" form of the disorder.

The above may be taken to represent the tendency which inherently exists in connexion with the disease. Much variation, however, with respect to extent of disposition to advance is noticeable in different cases. The progress is observably influenced by intrinsic and extrinsic circumstances. Speaking generally, with reference to the former the younger the patient and the more sensitive the nerve organisation the greater the proneness for the disease to run on speedily into the second or "composite" stage, and when this stage is reached for coma to supervene. Age, as is well known, is a most important item of consideration in connexion with prognosis, and, although exceptional instances from time to time present themselves, the appearance of sugar in the urine of young subjects must be regarded as having a very serious meaning. Cases do sometimes occur in which a moderate amount of verifiable sugar is found to be present and in which the usual progressiveness is not observed to follow, but the event is rare. The extrinsic circumstances are resolvable into conditions which exert a disturbing influence upon the general metabolism of the body. They call for attention in detail.

The passage of a large quantity of sugar through the system leads, as observation abundantly shows, to general disorder of the operations of life. Sugar is wrongly present in the system and as a result of the toxic effect of this wrongly placed sugar general metabolism is interfered with and transit to the "composite" form of the disease is promoted.

Cases are frequently presenting themselves where evidence can be adduced to show that failure in keeping the elimination of sugar in check by dietetic means is a source of the development of the "composite" condition in diabetes. If the patient has been for some time passing a large amount of sugar—for instance, 50 or 60 or upwards per 1000—the acetone series may be expected to be found and the effect of removing or considerably reducing the sugar may be, within a shorter or longer period, to free the urine from them. In corroboration I will cite the following cases. They are all cases in which at the commencement sugar in large quantity was being passed from want of observance of the proper exclusion of carbohydrate food. The diabetic dietary was in each case ordered to be followed. In some, but not in all, of the cases, as was rendered evident by the analytical reports for sugar, strict attention was at once given to the prescribed dietary. In all, however, the attention given was sufficient materially to reduce the sugar eliminated and greatly to improve the patient's general condition.

CASE 1.—This patient, a man, aged 51 years, was first seen by me on July 11th, 1900. He had been the subject of diabetes for 18 months, and through the disease being allowed to run on uncontrolled he had got into an exceedingly unsatisfactory state of health. The sugar indication by copper reduction was 66 and by the polarimeter 60 per 1000, showing a difference of six due to the neutralising levorotatory effect of the oxybutyric acid present. The ferric chloride reaction for diacetic acid gave a colouration requiring +++ signs for its representation. July 14th: Sugar by copper reduction, 26 per 1000 and by polarimeter, 22 per 1000; and diacetic acid, ++. July 25th: Sugar by copper reduction, 35 per 1000; by polarimeter, 31 per 1000; and diacetic acid, +. August 16th: Sugar by copper reduction, 7·6 per 1000; by polarimeter, 5·9 per 1000; and diacetic acid, 0. Oct. 2nd: Sugar, 0; and diacetic acid, 0.

CASE 2.—The patient, aged 62 years, was first seen on Nov. 16th, 1900. Sugar indication by copper reduction, 76 per 1000; by polarimeter, 72 per 1000; and diacetic acid, ++. Dec. 14th: Sugar, 27 per 1000; and diacetic acid, 0. It will be understood from what has been previously said that absence of diacetic acid implies also absence of oxybutyric acid. Since the last date the sugar has been fairly kept down and when the patient was last seen, June 6th, 1902, the report was: sugar, 18 per 1000; and diacetic acid, 0.

CASE 3.—The patient, aged 63 years, was first seen on Oct. 21st, 1899, when the copper reduction indicated 45 per 1000 and the polarimeter 37 per 1000 of sugar, with diacetic acid, +++. On Dec. 14th the copper reduction and polarimeter agreed and indicated 27 per 1000 of sugar; diacetic acid, 0.

CASE 4.—This patient was 57 years of age at the first interview, on March 2nd, 1901, when the amount of sugar found was 91 per 1000 with diacetic acid ++. On March 15th the sugar had become reduced to a trace and the diacetic acid to 0. On April 1st both sugar and diacetic acid were absent.

CASE 5.—The patient, aged 56 years, was first seen on Nov. 9th, 1899. The sugar then was 77 per 1000; oxybutyric acid, 0; and diacetic acid, ++. Nov. 14th: Sugar, 22 per 1000; oxybutyric acid, 0; and diacetic acid, ++. Nov. 22nd: Sugar, 14 per 1000; and diacetic acid, 0. Nov. 30th: Sugar, 0; and diacetic acid, 0.

CASE 6.—The patient, aged 31 years, was first seen on Oct. 31st, 1901, when the amount of sugar found was 83 per

[2] Minkowski, Archiv für experimentelle Pathologie und Pharmakologie, Band xxxi.; Araki, Zeitschrift für physiologische Chemie, Band xviii.; and Sternberg, Virchow's Archiv, Band clii.

1000 with a diacetic acid indication of ++. Nov. 2nd: Sugar, 50 per 1000; and diacetic acid, +. On March 11th, 1902, analysis gave sugar, 11 per 1000, and diacetic acid, 0.

CASE 7.—This patient was 57 years of age when first seen by me on Oct. 19th, 1897. His case then fell in the "alimentary" type of diabetes. The urine quickly became free from sugar and the patient recovered sufficient assimilative power over carbohydrate to enable him to partake freely of bread and potatoes without passing sugar. On Jan. 2nd, 1901, he came to me with the history that two months previously he had taken cold and had been laid up with bronchitis and influenza. His diet had recently included milk and farinaceous articles somewhat largely and his old symptoms of diabetes had returned. His urine contained 50 per 1000 of sugar with diacetic acid represented by ++. He was placed upon the restricted diet and on Jan. 16th the urine was free from sugar with diacetic acid +. On Feb. 20th there was neither sugar nor diacetic acid. This state continued and in October it was found that a tolerating capacity had been regained for six ounces of ordinary bread per diem.

It can scarcely be otherwise than that the inference to be drawn from these cases is that the metabolic equilibrium becomes upset by the toxic effect of the abnormal presence of sugar in the system and that by the removal of this influence metabolism may again settle down into an orderly mode of procedure. I think that under the voidance of a large quantity of sugar the development of the double condition may be ordinarily expected to occur as a sequence before any great length of time has passed, but certain cases seem to have more or less of an inherent quality belonging to them which influences the result. I can cite the case of a female patient whom I first saw in 1887. She was then 57 years of age and had already been suffering from diabetes for a year. For some time attention was given to treatment and the sugar was kept fairly under. At times in 1890, 1892, and 1893 exceedingly large quantities of sugar were passed and since this period the quantity has always been more or less large. Extensively diffused neuritis has developed and a certain amount of albumin has appeared in the urine with hyaline and finely granular casts but no diacetic acid has shown itself. My last entry is for the early part of last year and then there was an absence of reaction with the ferric chloride test.

(To be concluded.)

THREE CASES OF MOTOR APHASIA FROM INJURY TO THE HEAD, TWO OF WHICH WERE RAPIDLY CURED BY OPERATION.

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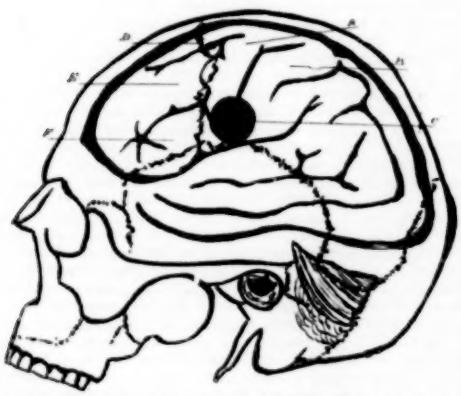
IN the first case the injury, without producing a fracture of the skull, induced complete unconsciousness, followed by epileptiform fits, and while unconsciousness was returning complete paralysis of the right arm and leg appeared. The operation was performed on the tenth day after the accident and the patient was completely recovered from all the symptoms of injury on the twentieth day. In the second case the injury had produced a depressed fracture of the skull associated with complete unconsciousness and on the fourth day epileptiform attacks developed involving primarily the right arm and leg. On the fifth day the skull was trephined, the bone was elevated and blood was removed, and on the twenty-eighth day the patient had completely recovered. In the third case the injury produced aphasia and unconsciousness only, there were no fits and no paralysis, an operation was not performed, and the patient made a slow recovery during four months.

CASE 1. *Injury to the head by a fall from a bicycle, followed by unconsciousness and incontinence of urine, and after three days by epileptiform seizures which at first were few in number but afterwards very frequent; consciousness returning showed the presence of motor aphasia; the fits developed in severity and increased in number; on the ninth day after the accident partial, and on the tenth day complete, paralysis of the right arm and leg ensued, while the mental condition was improving; operation was immediately followed by cessation of epileptiform attacks, rapid recovery of movements in the paralysed limbs, and complete recovery of speech within a fortnight.*—The patient, a man, aged 25 years, was cycling on the evening of Feb. 5th, 1902, when he was knocked off his bicycle by running into a person on the road. He was picked up unconscious and was sent to the Glasgow Royal Infirmary early on the following morning. His condition on admission, as recorded by Dr. Cuthbert, my house surgeon, was as follows: "He was quite unconscious, but when disturbed he resisted in a half voluntary fashion. The face was flushed; the temperature was 100° F. and the pulse 100, rather feeble; the pupils were equal and moderately contracted and reacted to light; there was no hæmorrhage under the conjunctiva. From the right ear there was a little oozing of blood, but owing to the patient's restlessness on being touched it was impossible to say if the tympanic membrane was injured. There was a little vomiting since admission." On the 9th the patient was still unconscious but very restless, the pupils remained quite equal, and no bleeding from the ear was observed. In the morning he seemed to understand a little of what was going on, but at 11 A.M. he had a severe epileptiform seizure starting in the right hand and gradually extending over the whole body. The twitchings were well marked on the right side of the body and the mouth was drawn to the right side of the face. The whole attack lasted only half a minute. He had two similar seizures within two hours. On the 10th the patient had had seven attacks since the previous day, but the longest attack only lasted about one minute. They all affected the right side first, but in some the twitchings were limited to the face. The patient was still very stupid but seemed to know something of what was going on around him. He opened his mouth when told but could not answer questions although he attempted to do so; there was no paralysis and the pupils were equal. On the 11th there was no recurrence of fits and the patient had gained consciousness but could not speak a word. He recognised and shook hands with his mother and seemed annoyed that he could not speak. After this note was made the patient gradually improved in his general condition; he had no more fits until early on the morning of the 13th, when he had four slight ones, each lasting about half a minute and only affecting the right side and face. The face was much flushed, but the temperature was subnormal and the pulse was 56 per minute and of moderate tension. There was no paralysis of the muscles of the face or of any part of the body and the pupils were equal and reacted to light. He was now quite conscious but still very slow in cerebration. He could help himself to milk when it was left at his bedside. When he attempted to reply to a question he made a great effort and got out an inarticulate sound and then shook his head in disgust. He seemed anxious to get a magazine which he held up in front of his face and he was annoyed when it was taken from him. His manner and gestures showed that he understood spoken, written, and printed words but he was unable to speak and could not imitate either written or printed words although he made an attempt to do so when asked. When his drinking cup was held up and he was asked what it contained he shook his head and pointed to his mouth to indicate that he either could not say the name or that it contained something to drink. When asked if the contents were soup, tea, coffee, water, wine, or beer, he indicated a negative with a slight shake of the head, but when the word "milk" was mentioned he correctly indicated the affirmative, and when the word "milk" was written alongside the others above mentioned he pointed to it correctly. On the evening of the 13th at 6 o'clock the patient had a severe epileptiform fit and between that time and nine o'clock he had 12 attacks; these were all similar in character except one in which the convulsive movements were confined to the face. The attacks were characterised not so much by twitching as by rigidity of the muscles of the right arm and leg. The patient seemed to know when they were coming on and immediately they were over he was quite conscious. When a fit was coming on the face became flushed, the pupils dilated and the head turned towards the right side, the right hand then became flexed at the wrist and fingers, the forearm then became flexed, and the whole arm retained a rigid position for about from a minute to a minute and a half; this rigidity extended all over the body. The patient rolled round on his right side and then almost on to his face with the head much retracted and the left leg was lifted from the bed. The

attacks commenced again on the afternoon of the 14th at 1.45; 13 fits occurred up to 8 P.M. On the 15th it was reported that during the previous 24 hours the patient had had 48 attacks, and on that morning it was observed that the right hand was slightly paralysed. During the day the paralysis became more marked; there was no paralysis of the leg or of the muscles of the face. From midnight up till 2 P.M. of the 16th the patient had 18 fits and these were both more severe and more prolonged than formerly. The paralysis of the right arm was now complete, and the movements of the right leg were greatly impaired, but there was no paralysis of the facial muscles and the pupils were equal.

At 2 P.M. on Feb. 16th I trephined the skull a little behind and above the anterior inferior angle of the left parietal bone far enough back to avoid the middle meningeal artery. (Fig. 1). On exposing the dura mater it was

FIG. 1.



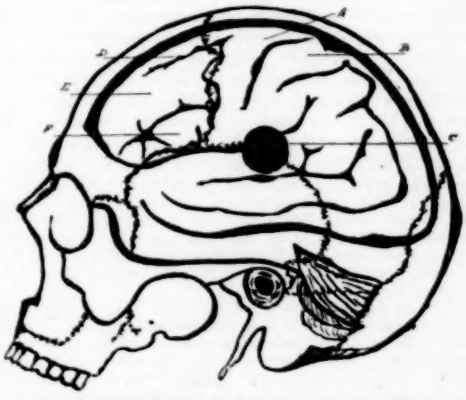
Illustrating the position of the trephine opening in Case 1—viz., at the anterior inferior angle of the left parietal bone. A, Ascending frontal convolution. B, Ascending parietal convolution. C, Trephine opening. D, First parietal convolution. E, Second parietal convolution. F, Third frontal convolution.

seen to bulge outwards; it was devoid of pulsation and was separated from the brain by a quantity of very dark fluid blood. On opening the membrane about an ounce of blood escaped. Three tubes were inserted, one passing upwards towards the ascending frontal convolution, one backwards in the direction of the superior temporal, and one forwards as far as the middle frontal, convolution. An opening was made in the centre of the skin flap and the tubes were carried through. On the evening of the 16th the patient had had no fits since the operation. He was now much brighter and considerably improved in general appearance, there was some movement both in the right arm and leg, but the patient remained completely aphasic. On the 18th the power had almost completely returned to his right arm and leg, but there was still a little facial paralysis on the right side; there was no recurrence of the fits, and although he was now quite intelligent and conscious he was quite unable to speak. Since the operation a considerable quantity of blood had escaped into the dressings so that they required to be changed twice. The cerebral pulsations were now clearly communicated to the drainage tubes, which rested upon the surface of the brain. On the 20th the patient fully understood all that was said to him, but still he was unable to name any objects, figures, or written words which were shown him and could not repeat spoken words or copy writing with the exception of the initial letters of his own name, and even these he did not form correctly. When told to do anything, such as to show his tongue, to hold up a certain number of fingers, or to turn to a given page in a book, he could do so correctly and he recognised his name when he heard it. On the 21st for the first time he was able when asked to repeat his name, but he spoke in a very indistinct way. He still continued to improve on the 22nd, although there remained some facial paralysis. His speech had improved and he could now use a good many words but not in a correct fashion, although as a rule he succeeded in making his meaning clear. On asking him to read printed matter he could make out most of the words, although evidently with some difficulty, and his pronunciation was peculiar; he seemed to stick at small words like *a* and *the* and said that he did not understand them, but he could read written words well. On asking him to write his name he managed successfully to write the initials but generally mis-spelt his name. In writing a word to dictation he had great difficulty, but when it was spelt for him he started off with a rush while one was still speaking and generally broke down in the middle of the word, and when he got stuck at a word he started off writing his own initials. On the 26th the patient continued to improve and he could now make himself clearly understood, although there were a considerable number of words he was still unable to use. He read with difficulty, spelling out the words like a child learning to read; some letters he had more difficulty with than others—*y*, *p*, and *w* giving him most difficulty. On March 1st he spoke and read fluently, although his speech was perhaps a little clumsy and his reading somewhat syllabic.

CASE 2. *Compound fracture of the skull at the anterior inferior angle of the left parietal bone; symptoms of concussion with complete unconsciousness; on the fourth day slight twitchings of the right arm and leg; 10 epileptiform fits in 24 hours; operation followed by return of consciousness and cessation of fits; no paralysis; aphasia remained after consciousness returned; complete recovery on the twenty-eighth day after operation.*—A lad, aged 14 years, was admitted into the Glasgow Royal Infirmary on Feb. 22nd, 1900. A charge of gelignite was being rammed home in a bore in a coal-mine in which he was working. The weather at the time was extremely cold and the gelignite was hard and was consequently more explosive than usual. While the operator was driving the charge into the bore it suddenly exploded; the operator was killed, two men standing beside him were severely injured and brought into the infirmary, while the patient was struck on the head by a fragment of stone. On admission the patient was found to be suffering from symptoms of concussion. Over the anterior inferior angle of the left parietal bone there was a lacerated wound of the scalp. At the anterior part and near to the lower border of the parietal bone the aponeurosis was divided and immediately underneath there was a depressed fracture, and from the point indicated a fissured fracture ran forward beyond the reach of the finger. From the 22nd to the 26th he remained unconscious, but on the latter date, for the first time, twitchings of the right side of the face were observed, followed by paresis. In the evening of the 26th the patient had an epileptiform attack involving the right side of the body with the exception of the leg; there was conjugate deviation of the head and eyes to the right side, and both tonic and clonic spasm of the right arm.

On Feb. 27th I trephined the skull one and a half inches behind the anterior inferior angle of the parietal bone and removed a portion of the parietal and a fragment of the temporal bone. (Fig. 2.) The patient was so unconscious

FIG. 2.



Showing the position of the trephine opening in Case 2—viz., one and a half inches behind the anterior inferior angle of the left parietal bone, and including a portion of the temporal bone. Letters as in Fig. 1.

that the operation could be performed without the aid of an anæsthetic. An hour after being put back to bed the twitchings were observed on the right side of the face, also conjugate deviation of the head and eyes to the right, the right arm also being involved. After 4.30 P.M. the patient was free from any attacks of epileptiform convulsions until seven o'clock on the evening of the 28th, when he had a slight attack implicating the face, head, and eyes. From the 28th to March 6th the patient had no fits, but when consciousness had completely returned he was found to be aphasic. Showing him familiar objects, such as a cup, a spoon, a knife, or a chair, he was unable to name them. He appeared to understand spoken words but was incapable of appreciating anything written or printed; he was unable to copy any letters or words, he could not write to dictation, nor could he repeat words mentioned to him. On March 10th the patient had greatly improved; he could now answer questions of a simple character, such as his name, his age, and his place of birth, but he found difficulty in repeating words read to him. He was unable to read either printed or written words. When figures were placed in front of him he could indicate the smaller numbers with his fingers but he was unable to write on paper a corresponding number of strokes to the number shown him. Dr. John Love was asked to see the patient the following day and by this time marked improvement had taken place. Dr. Love dictated the following note. "There is no paralytic symptom of the face, eyes, or limbs, and no changes of the reflexes, superficial or deep. The stereognostic sense cannot be tested on account of the aphasia and slight agraphia. The aphasic condition seems to be purely motor, there being neither word- nor letter-blindness, nor is there any blindness for figures, Arabic or Roman; there is no word-deafness or mind-blindness; there is a degree of agraphia. He can write to dictation and also spontaneously; he makes some mistakes, such as 'tonnge' for 'tongue' and 'ding' for 'drink'; there is no hemianopsia and the optic disc is normal." As regards the aphasia the patient had greatly improved on the 16th. He was now able to repeat the names of patients who lay near to him in the ward and made a fairly good attempt at the numerals when asked the number of fingers held up or printed figures shown to him. On the 20th the patient was able to repeat the alphabet so as to be understood and to say the numerals correctly; his articulation was not quite perfect but he made rapid improvement in the employment of words, although still he had difficulty in writing the letters of the alphabet. In asking him to read, the only letter of the alphabet which seemed to puzzle him was the letter *f*. The power of speech had returned on the 27th so that the patient was able to answer any question put to him, and he could write an original letter or to dictation as correctly as at any time prior to the accident. He was dismissed on April 25th perfectly well.

CASE 3. *Injury to the head by a fall from a bicycle, followed by complete unconsciousness and incontinence of urine of one month's duration; deglutition difficult; no epileptiform attacks and no paralysis of the limbs, but evidence of motor aphasia slowly recovering during four months; no operation performed; slow recovery of speech during four months.*—A man, aged 26 years, was admitted to my ward in the Glasgow Royal Infirmary on Nov. 14th, 1899. He was recommended to me by Dr. John Mackinnon of Drymen, who supplied me with a very carefully-prepared history of the case, from which it appears that the patient was riding home from Glasgow to Drymen about 11 P.M. on Sept. 10th, 1899. In going down a hill just past Kilmarnock School he was violently thrown from his bicycle, having run over a man who was lying across the road very much the worse for drink. When seen by Dr. Mackinnon at 2 A.M. on the following morning he was completely unconscious, but there was no evidence of external injury with the exception of an abrasion on the back of the head, where the scalp was denuded of hair and covered with road dust. This denuded patch was situated about two inches above the external occipital protuberance, one inch to the left of the middle line. There was no indication of the skull being fractured at the point referred to. There were no signs of paralysis of the legs, the arms, or the facial muscles. The patient remained completely unconscious until the 25th. During the week from the 18th to the 25th the days and nights were passed in a condition varying from the quietest sleep to extreme restlessness. When restless he turned from side to side and generally ended in being completely rolled up inside his blankets and sheet. He passed urine and fæces involuntarily, and while awake he looked a great deal about him but made no sign of recognition. On the 25th the patient began to speak, but it was mere gibberish, though the sounds had a resemblance to words. From this time his general condition began to improve, but during the week from the 26th to Oct. 2nd the evacuations remained involuntary. During this week the patient talked a great deal but failed entirely to articulate words. He failed to recognise anyone in particular or to distinguish between different persons. To quote Dr. MacKinnon's report, "He always called his aunt 'mother,' 'father,' or 'sister,' and also myself 'Johnnie'; everybody was 'Johnnie' or 'Johnnie first' or 'Johnnie second.' The only other words he used this week were 'ponens' or 'ponens twice,' or 'twice ponens,' and sometimes he carried on a long conversation only using the words referred to above and mixing them well; he also talked very volubly, using chiefly inarticulate sounds which had not the least resemblance to the English language. During the week ending with Oct. 9th the patient had considerably improved. When I (Dr. MacKinnon) visited him he would say, 'Good morning, Johnnie, thank you very much; yes, please, thank you.' He got his photograph taken on the day of the accident in a group along with two fellow workmen who are companions of his. I showed him the photograph and asked him who they were; he immediately pointed to himself and said, 'Johnnie first.' Who is the next? 'Johnnie second' (real name H—— G——). Who is the third fellow? 'Johnnie' (real name W—— McF——). The photograph also included a bicycle standing in front of the group, but he could make nothing out of it. I tried him in reading with the large letters of the alphabet but he did not know a single one. This is how he named them: A, 'ponens twice,' B, 'twice ponens,' C, 'Johnnie Pad,' D, 'Johnnie.' He cannot read a single word in the newspapers but simply talks gibberish in the same way as he does with single letters." At this period he was quite unable to recognise relatives. From the 9th to the 16th his general health markedly improved. Two companions called to see him during the week, he evidently knew them but could not name them, and he still failed to recognise any of the letters of the alphabet, although he was able to indicate the use of such common articles as a knife, a fork, a spoon, a hammer, or keys, but he was unable to name them or repeat the name when it was mentioned. On the 16th Dr. Mackinnon made the following note:—

"I. *Name and use of familiar objects.*—(1) (Showing him a chair), 'What do you call that?'—'Johnnie.' 'What is it used for?'—'Nothing that I know very much very much Johnnie to me.' 'Sit down.'—Does so. (2) (Showing him a fork), 'What is the name of that?'—'Wee Johnnie before this time.' 'What is it for?'—'Knows quite well.' (3) (Showing him bread), 'What do you call that? Name it.'—'Johnnie pad to me, second this time.' 'What is it for?'—Eats it and says, 'Thanks very much.' (4) (Pointing to his mother), 'Who is this'?—'Johnnie.' (He now seems to recognise his mother from a stranger.)

II. *The understanding of spoken words.*—'How are you today?—'I am better, thank you, just now very much than Saturday of course.' (I think he has learned this phrase about asking for him because in giving him a sentence that he was unfamiliar with he did not understand it—e.g., 'Put on your cap,' elicited no response; 'What o'clock is it?' elicited no response.

III. *Does he understand printed or written words?*—I gave him to read in large printed letters, 'Old Gold Cigarettes' He read as follows: 'Old Tommy second path second tomas ponens.' Next tried him with each letter. 'What letter is that, O?'—'Second pass.' 'What letter is that, L?'—'Tommy second.' 'What letter is that, D?'—'Johnnie top.'

IV. *Voluntary speech.*—This is lost, as he never asks anything in a coherent manner or gives any information.

V. *Supposing he does name a printed word correctly, does it convey any real meaning to him?*—No.

VI. *Can he write his name voluntarily?*—I said, 'Write your name,' he wrote, 'Ddma Hdardrdmas.' 'Now,' I said, 'read it'; he read, 'Johnnie Mate second time.'

VII. *Can he copy written or printed matter?*—Yes. He wrote his name, 'John ——,' and copied it correctly. He can also copy printed words correctly (but of course he does not understand the words he copies)—e.g., 'Mixture is what I smoke,' he wrote, "MixTure is what I smoke."

VIII. *Can he write to dictation?*—Asked to write, 'Is what I smoke,' he wrote, 'is waht I wake.'

IX. *Can he repeat words?*—No; I said, 'Say mother,' but he could not do it and made an attempt by saying, 'on a top i.'

Nov. 7th, 1899.—Patient's general health has improved very much within the last three weeks. He sleeps well and eats well and is fond of work. He has been doing little jobs in connexion with his trade as a joiner and knows quite well what he means to do, and also the use of his tools. He sleeps well, is quite cheery and happy, and whistles lots of familiar tunes, but never tries a song. I have often tried him to sing a verse of a song, but he never would attempt it. He knows his people better now, but still calls them 'Johnnie' or 'the old ane.' I again tested his condition to-night, pretty much in the same lines as before (*vide* Oct. 16th). Knee-jerks are good.

I. *Name and use of familiar objects.*—(Showing him a pen), 'What is that?' Reply, 'The red one.' (Showing a pocket knife), 'What is that?'—'The top or red one.' (Showing a bunch of keys), 'The top.' (Showing a watch), 'The top part.' (Showing a plant), 'The red one.'

II. *Ability to read.*—(1) Printed matter and asked to read the following: 'All fat people,' he read, 'All at person.' Asked to name each letter, he knew them all with one exception. Asked to read, 'A soldier in camp,' he read, 'A person in at.' (2) Written matter.—I wrote the following letter to him and asked him to read it, what he read being in parentheses: 'Drymen, 7 November, 1891 (Johnnie, 11 Up, 1891).—Dear John (That on), Was it raining to-day? (Was it again to-day?), Did the river overflow its banks? (Did the person up at things?), Would you like to go to London? (Would you like to go to things?), or Africa at present? (or top at things?).' Asked to read his name he knew it at once. (3) Figures. He can name most of the figures correctly, can do a little addition, but cannot manage subtraction. Asked to add 32,453 to 24,621 he gave the answer correctly, 57,074. Asked to subtract 214,346 from 437,896 he gave the answer wrong, 650,122.

III. *Can he write volitionally?*—No; this is absolutely lost.

IV. *Can he write to dictation?*—No; this is absolutely lost.

V. *Can he write figures when dictated?*—Yes, partially; he wrote straight on to 28, but could not write them correctly if not given seriatim.

VI. *Does he understand spoken speech?*—Yes, partially; if asked to put out his tongue he does so, and when asked to sit down on a chair he did so. If assisted by gesture he knows at once what is meant.

VII. *Does he understand written matter?*—No; but he can copy it correctly. I wrote on a piece of paper, 'This was a very wet day,' and he copied it correctly.

VIII. *Can he copy printed matter?*—Yes. The following observations were made as to interruptions in sensory centre.

I. *Understanding of speech*—When spoken to no doubt he understands many words, but still there is marked impairment.

II. *Understanding of writing.*—This is absolutely lost.

III. *Understanding of printed matter.*—He can *name* some of the smaller words correctly, but they convey no intelligent meaning to him.

IV. *Can he repeat a word spoken to him?*—No; occasionally after many attempts he may hit on it, but he would much rather prefer that you would accept a substitute. I asked him to say 'lamp' and after a few attempts he said 'lama.' This is a proof that he has no intelligent conception of written words, word-blindness. I wrote on a slip of paper the following request in large plain letters, 'Please give me a small' (his reading was, 'Things again me a person') 'bit of tobacco' ('yet of things')? He had no idea that tobacco was wanted. Then I wrote, 'Will you be kind enough' (he read, 'Will you be again things') 'to give me the loan of' ('to things me to things of') 'your pocket-knife' ('our tops things')? This conveyed no idea to him that I wanted his pocket-knife. 'What time is it on' ('That time is it on') 'your watch' ('our things')? Even when shown a watch he does not know the time on it. *Note.*—It will be seen from this examination that he has improved a good deal from the time he began to go about."

When admitted to the Glasgow Royal Infirmary he was still very aphasic and had but a limited and very incorrect vocabulary. He was, however, quite cognisant of his inability to speak and after he came out with false words evidently appreciated their inapplicability. He could pronounce his own name, but when asked where he came from he spelt the name of the town and failed to pronounce it. He could tell the days of the week and count the numerals and his figuring was perfect, and he could add correctly but he used his fingers to count. He knew the comparative value of coins but could not correctly state their worth. He could read only short words and when asked what caused his accident he was unable to say, but when pressed for an answer he drew the picture of a bicycle. During his residence in the infirmary he made rapid improvement and the case not being one demanding surgical interference the patient was transferred to Dr. Middleton's ward. When he was dismissed therefrom on Dec. 29th he could speak fairly well and could remember the nature of the accident which led to his injury. The patient was seen by me several times since he was dismissed and in May, 1900, he was perfectly well.

Glasgow.

A REPORT ON 43 CONSECUTIVE CASES OF DIPHTHERIA.

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IN publishing the statistics of 43 consecutive cases of diphtheria admitted to the Norfolk and Norwich Hospital during the past two years, it is our intention to show the value of tracheotomy and free administration of antitoxin in the treatment of this disease. The cases admitted to this hospital were those suffering from laryngeal obstruction and many of these were brought here *in extremis*. In these circumstances it will readily be understood that 39 out of the 43 cases required operation. The total number of deaths will be seen to be 10, out of which five cases—i.e., one half—were aged between one and two years, two between three and four years, while the total number of patients admitted at these ages was 12 and 14 respectively, thus showing a mortality of 41⅔ per cent. at the former age and only 14 per cent. at the latter age. But of these 43 cases it will be seen that 24, or rather more than one half, had a laryngeal and pharyngeal infection, while 14 had laryngeal infection alone, with a mortality in the former case of 16 per cent. and in the latter of nearly 50 per cent.; it is, however, only fair to state that out of the six deaths occurring in the latter (laryngeal alone) variety—one was due to suppression of urine, two were due to broncho-pneumonia, while of the other three two patients died from asphyxia and one from hæmorrhage into the trachea which was started during a fit of coughing within a few hours of the operation. Three cases which recovered had a laryngeal, pharyngeal, and nasal infection. All the patients who recovered were examined as late as three weeks after discharge from the hospital for signs of paralysis, and in three only was any present.

STATISTICS.

The total number of cases was 43. Tracheotomy was performed in 39 cases, the result being that 29 of the patients recovered and 10 died (one child had ceased breathing before the operation had begun). Paralysis occurred in three cases; all recovered completely. One patient had a pharyngeal infection alone; no antitoxin was administered and the paralysis occurred 25 days after the onset of the disease. One patient had a pharyngeal, laryngeal and nasal infection; 17,000 units of antitoxin were injected and paralysis occurred on the fifty-fourth day of the disease. In a third case the patient had pharyngeal and laryngeal infection; 6000 units of antitoxin were administered and paralysis occurred on the fifty-seventh day of disease. Cultures were taken in 18 cases showed the following result: in five cases there was a pure culture of diphtheria; in six a mixed culture of diphtheria and staphylococci; and in seven pure cultures of staphylococci or mixed staphylococci and streptococci.

TABLE I.—*Age and Incubation Period.*

Age in years.	Number of cases.	Days ill before admission.	Number of cases.
Under 1	1	1	6
,, 2	12	2	7
,, 3	4	3	6
,, 4	14	4	5
,, 5	7	5	4
,, 6	3	6	1
Over 10	2	7	6
		8	5
		11	1

TABLE II.—*Seat of Infection and Day of Removal of Tracheotomy Tube.*

Varieties of infection.	Number of cases.	Day on which the tube was left out.	Number of cases.
Pharyngeal	2	Second.	6
Laryngeal	14	Third.	12
Pharyngeal and laryngeal	24	Fourth.	6
		Fifth.	2
Pharyngeal, laryngeal, and nasal	3	Sixth.	1
		Tenth.	1
		Fourteenth.	1
		Twenty-third.	1

TABLE III.—*Date of Appearance of Rash and Amount of Antitoxin Injected.*

Number of days after injection of serum before the appearance of rash.	Number of cases.	Number of 1000 units of antitoxin injected.
3	1	6
6	1	15½
7	1	32
8	3	27, 9, 9
10	2	7, 12
11	1	13
12	1	8
13	1	17
16	1	10
17	1	6
31	1	3

Rash occurred in 14 cases. In 11 of these cases the rash was an irritable urticaria with some erythema surrounding the wheals varying in distribution and extent from a few patches on the knees or abdomen to a profuse rash affecting the face, the limbs, and the trunk. In only one case was there constitutional disturbance—namely, rise of temperature and malaise. In three other cases an irritable small papular eruption was noticed over the limbs and in one of these the rash was accompanied by pyrexia and vomiting. Albuminuria was found in 30 cases; of the remaining 13 cases six definitely had none, while in the other seven cases no urine could be collected. The amount of albumin varied from one-half in one case to a mere trace, the average being a definite deposit after boiling and allowing the coagulum to settle.

Complications.—In seven of the fatal cases the complications were as follows: pharyngeal infection after laryngeal arising on the fifth day after admission and an injection of 6000 units of antitoxin in one case; hæmorrhage following tracheotomy in one case; broncho-pneumonia in two cases; suppression of urine in one case; asphyxia in one case (prior to tracheotomy); and cardiac failure in one case. In the non-fatal cases the complications were: broncho-pneumonia in four cases; otorrhœa in one case; subcutaneous emphysema in one case; paralysis in three cases; and diphtheritic infection of the nose and of the wound in one case (this case is mentioned in detail later). Accidental complications present were congenital syphilis, measles, and old pleurisy with a contracted chest.

Length of stay in hospital.—The length of stay in hospital in the fatal cases was less than 24 hours in six cases; two days in one case; three days in one case; five days in one case; and six days in one case. As regards the recoveries the average number of days the patients remained in hospital was 33, the longest period being 47 days and the shortest 12 days.

TREATMENT.

Tracheotomy.—In no case was an anæsthetic employed, the patient's head being fixed in Caiger's head-rest and the limbs being bound to the table by bandages. Special attention was paid to dividing all the layers in the middle line to avoid closure of the tracheal wound by overlapping tissues and thus facilitating the earlier removal of the tube as the wound then remained patent for breathing purposes for several days.

Tube.—Parker's silver tube was employed in all cases, it being removed for cleansing at the end of from 24 to 48 hours and then either replaced or substituted by a rubber one if any tube was found necessary. At the end of 48 hours an attempt was always made to leave out the tube entirely. In six cases the attempt was successful and in 24 out of the remaining 30 which survived permanent removal was effected on the fourth day. In one case in which the tube could not be removed till the tenth day there was still abundance of membrane being coughed up, causing much dyspnœa during expectoration. In two other cases the dyspnœa and recession during sleep were such as continually to awaken the child, on which account it became necessary to replace the tube, though during the waking hours the breathing was absolutely unembarrassed. One of these cases was treated with a mixture of tincture of belladonna, bromide of ammonium, and compound tincture of camphor with marked success, the child sleeping easily without the tube on the following night. The other case where the tube could not be removed until the twenty-third day was much benefited by attempted intubation which, though not complete, apparently removed some obstruction existing in the larynx.

Antitoxin.—An initial dose of 6000 or 8000 units—i.e., from 20 to 30 cubic centimetres of Parke Davis's preparation—was employed and in few cases it needed repetition. The indications relied on for pushing the antitoxin were: (1) persistent rise of temperature with other signs of toxæmia; (2) abundance of membrane and dry inspissated mucus; (3) broncho-pneumonia; and (4) spread of disease and re-infection. The temperature usually responded to the initial dose and reached the normal by the third or fourth day after a gradual decline. In several cases dry inspissated lumps of mucus gave rise to as much trouble as pieces of membrane and required the use of mechanical means for their removal from the trachea. In these cases also pushing the antitoxin was followed by marked success. In all cases of broncho-pneumonia small doses—i.e., 2000 units—were given once or twice daily until the temperature began to fall. One child had altogether 18,000 units of antitoxin during the first five days of treatment with a resulting cure, the temperature which had been previously sustained gradually falling to normal after this date. (The chart of this case is published with this article.) The average dose given was 9400 units with a maximum of 33,000 and a minimum of 2000 units. Two cases, in which 6000 and 21,000 units were given respectively, developed further disease, the former a pharyngeal after a laryngeal infection with a fatal result and the latter a nasal and wound infection following primary disease in the pharynx and larynx. The patient in the latter case was discharged cured, but has since been re-admitted owing to the breaking down of the tracheotomy wound, which however slowly healed under treatment. Short notes of this case are published.

Stimulants.—These were freely administered, brandy, strychnine given hypodermically, and carbonate of ammonia being those relied on.

Expectorants were given in every case, squills, ipecacuanha, tolu, &c., being those chosen. Under this heading may be included a steam spray of solution of sodium bicarbonate, which was administered as a routine every half-hour for the first 24 to 48 hours or longer if the indications

persisted. The atmosphere of the tent in which the child was nursed was further moistened by the steam from a bronchitis kettle.

Local treatment.—The pharynx or the nose was swabbed or syringed with antiseptic lotions of carbolic acid (1 per cent.) or boro-glyceride where there was persistence of membrane after 48 hours of treatment.

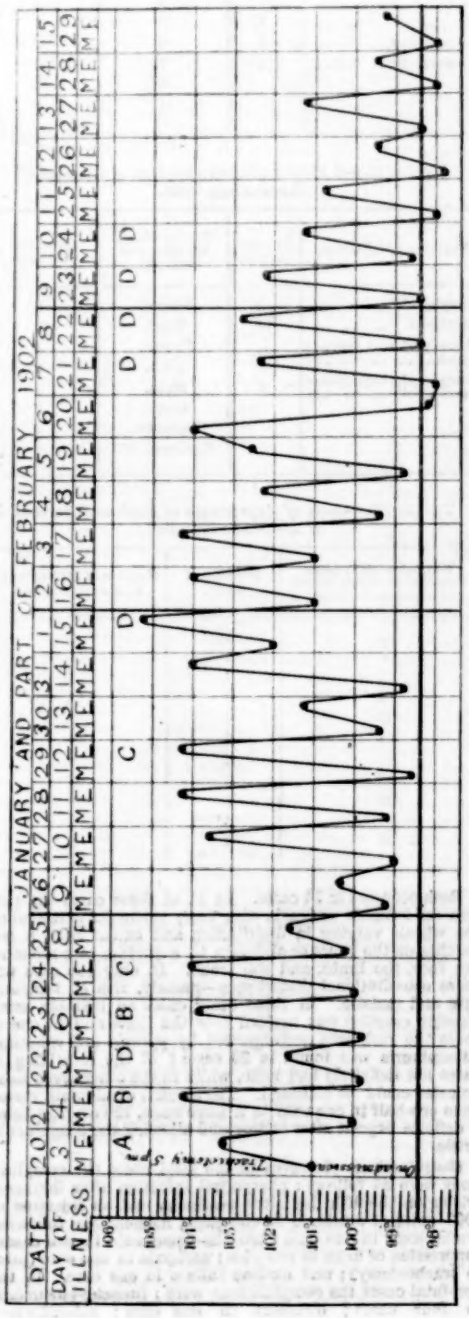
Indications for tracheotomy.—(1) Recession of the intercostal spaces, the lower ribs, and the clavicular fossæ was considered to indicate the necessity for tracheotomy; and (2) restlessness with dyspnœa were always regarded as most urgent symptoms and when present it was our rule to operate without delay. In no case was cyanosis waited for.

The following case appears to us to be of sufficient interest to warrant the publication of short notes of it.

The patient was a female, aged one and a half years, and was admitted on the third day of her illness with a history of stridor and dyspnœa for two days. On admission there were diphtheritic membrane on the right tonsil and evidence of advanced laryngeal obstruction. Tracheotomy was performed within an hour of admission—a No. 2 silver tube being inserted—and several pieces of membrane were coughed up at the time. A culture taken from the trachea showed mixed diphtheria bacilli and staphylococci. No anæsthetic was used. The temperature had then risen from 100° to 103° F., while the pulse-rate was 160 and the respiration-rate was 40 per minute. An initial dose of 5000 units of antitoxin was given and for the next four days the antitoxin was repeated, 18,000 units being administered during this period. On the fifth day the temperature had fallen to 101°, the pulse-rate to from 130 to 140, and the respiration remained about the same. There was at this time evidence of broncho-pneumonia which was limited to the right lung and the child was passing a very small amount of urine. On the next day the temperature was still lower. The antitoxin was discontinued and the tracheotomy tube was removed. The child breathed easily through the wound and was much improved in her general condition. On the following day a transient urticarial rash appeared over the limbs and the trunk, and the temperature rose to 103·6°, but there was no increase of the symptoms of the disease until the next day when the child developed a nasal discharge from which a mixed growth of diphtheria bacilli and staphylococci was obtained and at the same time the left lung became affected with pneumonia. On this evening and also the following one the temperature reached 104° and the rash persisted. A further dose of 3000 units of antitoxin was given and the temperature remained at 101·2° instead of rising as it had done previously to 104°, while the rash had much increased. On the eleventh day the temperature again rose and for the succeeding three days it oscillated between 101° and 105°. The child was now continuously ice-cradled and frequently sponged with tepid water and a further dose of 2000 units of antitoxin was administered on the twelfth day. In spite of the high temperature the child's general condition remained good; she took nourishment well but occasionally vomited. On the fifteenth day a second eruption appeared. This was a hæmorrhagic rash situated over the dorsum of the hands and feet and the extensor surfaces of the lower half of both legs. The patches were bright red and varied in size from that of a pin's head to that of a shilling and spread rapidly at the margins. This was thought to be an antitoxin rash, so no more of this remedy was given, and the rash faded in two days, the patches changing colour like a bruise. On the eighteenth day the tracheotomy wound, which had shown no sign of healing, was covered by a definite diphtheritic membrane, from which a mixed growth similar to the previous ones was obtained. As the temperature remained high and the pulse rapid antitoxin was again administered, 2000 units being given daily for four days, with the result that the temperature gradually fell. After the second injection the ice-cradle could be dispensed with and after the fourth all membrane had disappeared from the wound which then rapidly healed. On the twenty-sixth day the child was first noticed to have an intermittent internal squint with the left eye; the knee-jerks, however, were brisk and there was no sign of paralysis of the soft palate. From this time onwards the temperature remained normal except for an occasional slight rise and the child appeared to be quite well. At the end of five weeks she was discharged. The wound was then healed but on coughing there was bulging of the scar. A fortnight later she was brought back. The wound had reopened sufficiently to admit a probe easily and mucus was being coughed through it. Her general condition was unsatisfactory. The knee-jerks were absent but there was no further evidence of post-diphtheritic paralysis. The child is still under treatment as the wound is not yet sufficiently healed.

The temperature chart of this case is appended.

We are indebted to the courtesy of Dr. Barton, Dr. F. W. Burton-Fanning, and Dr. Long for permission to publish the notes of these cases.



A, 5000 units of antitoxin administered. B, 4000 units of antitoxin administered. C, 3000 units of antitoxin administered. D, 2000 units of antitoxin administered.

NOTE ON A CASE OF "TRUE" INTESTINAL SAND.

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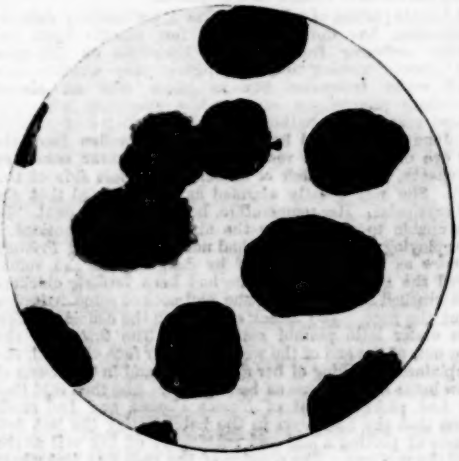
So little is known of this condition, if we may judge from the paucity of references to the subject in contemporary medical literature, that it becomes of interest as well as of importance to record any case of the kind, more especially when the report is supplemented by a chemical analysis. Through the kindness of Lieutenant-Colonel F. S. Peck, I.M.S., of Calcutta, I lately have had the opportunity of analysing a specimen of "true" intestinal sand which was passed by a patient seen several times by him in consultation, and I am further indebted to him for furnishing me with the clinical facts of the case.

The patient was a European woman, aged about 44 years, with a very marked history of gout. She had had a large number of "gouty deposits" in the smaller joints, with nodules in the ears, but the larger joints did not appear to have been affected. Several tendons had also been disabled from the same cause. Constipation was present, requiring treatment with saline purgatives. The motions were ordinarily normal in appearance except for the presence of mucus. There was apparently no diarrhœa alternating with constipation, as was sometimes the case in such patients. There was, however, a distinct, though not severe, attack of muco-colitis coincident with the passage of the sand. There was no history of colicky pains, vomiting, or distension. "There was never any intestinal pain to speak of." "The tongue was always particularly clean." She had not reached the menopause, was sterile, and had all her life suffered from ovarian pain. A sample of her urine was analysed by me in March last and had a brown, somewhat smoky appearance with much suspended matter; the specific gravity was 1020; acid reaction; much albumin was present with a few fibrinous casts and uric acid crystals. Lieutenant-Colonel Peck mentions the fact that the albuminuria entirely disappeared some months later. "At the time the sand was passed she had for months been on milk and farinaceous diet." The treatment was by preparations of lithium, occasional saline purgatives, and colchicum and iodide of potassium in mixture. The amount passed at any one time seems to have been not more than half a teaspoonful (usual size).



Showing shape of sand granules when viewed under the microscope.

On examination the deposit was found to be very finely granular and yellowish-brown, and very like fine sand. Under the microscope the particles were of very various shapes and sizes—oblong, irregularly oval, and of the other shapes shown in the diagram. The colour varied from black through reddish-brown to a light yellow. Many of the particles were only translucent at the edges. There was no appearance of vegetable or crystalline structure. The organic portion, washed and stained with methylene blue, showed a quantity of cocci and bacilli. The result of analysis is as follows: moisture, 5·20 per cent.; calcium phosphates, 28·68 per cent.; calcium carbonate, 5·20 per cent.; magnesium phosphate, 0·49 per cent.; and organic matter, 60·43 per cent. No traces of urates or uric acid were detected. The amount of sand remaining over was too small to allow of a sufficiently accurate examination to be made as to the nature of the pigment present. True intestinal sand appears to yield a vastly higher percentage (from 28 to 70) of inorganic constituents than does the false variety which gives only about from 2 to 3 per cent. generally.[1]

The above analysis, then, clearly shows that we are dealing in this case with an example of "true" intestinal sand as distinguished from the "false" sand which owes its origin to undigested vegetable particles (generally sclerenchymatous), occasionally coated with earthy salts. Pears, figs, and bananas are apparently specially liable to produce this "false" variety, which was, I believe, first described in England by Professor S. Delépine at a meeting of the Pathological Society of London in 1900. One of the most recent, as well as one of the best, papers on the subject is by Sir Dyce Duckworth and Dr. A. E. Garrod, published in the Transactions of the Royal Medical and Chirurgical Society, 1901, to which is appended a bibliography.

The case now recorded agrees with M. Dieulafoy's series in having occurred in a gouty middle-aged woman (about two-thirds of his cases are women about 35 years of age) and as regards the history of concurrent muco-colitis. The absence of painful paroxysms, vomiting, and flatulence is interesting, as in most recorded cases these symptoms have been marked. The albuminuria (with granular casts and uric acid) was also apparently a gouty manifestation in this case.

In the discussion which followed Duckworth's and Garrod's paper[2] Dr. A. Crombie, late of Calcutta, expressed the opinion that the affection must be commoner in India than in England and he mentioned the fact that in 10 years' experience at the Presidency General Hospital, Calcutta, he had met with three cases, all accompanied by severe colic which varied directly with the quantity of sand passed. It is to be regretted that there is nothing to show that these cases were examples of "true" intestinal sand or "enteric lithiasis" as the condition has been termed; for in the "false" cases colicky pain varying directly with the amount of sand passed is also a prominent feature and there is no mention of any other circumstance which would guide us to a knowledge of the true nature of Dr. Crombie's cases, as apparently there was no chemico-microscopical examination made in any of them.

The cause of true intestinal sand.—The relatively large proportion of lime salts is noteworthy. Bunge has pointed out that the proportion of lime present in milk exceeds that to be found in an equal bulk of lime-water. Hence, in cases which have been for long on an almost exclusively milk diet the source of the large proportion of lime salts present in true intestinal sand is to some extent explained. The intestine is, moreover, now known to be one of the main channels for the excretion of calcium salts from the system. And the "chalk-stone" deposits present in gout contain, in addition to their principal constituent (sodium urate), varying proportions of the phosphates and urate of calcium. As true intestinal sand appears to be closely associated with gout and apparently has not been observed in non-gouty patients who for long periods have been placed on an almost exclusively milk diet, one is inclined to regard the condition as allied in some respects to the tophaceous deposits in other parts. But how are we to explain the absence from the sand of uric acid and its compounds which so characterise these gouty deposits in other parts of the body? It is easy to conjecture that the inorganic constituents of the sand are derivable from the milk

[1] An exception to this occurs in the case of the calculi produced in the intestines of people fed on bread made from oat-bran. These concretions yield often some 15 to 20 per cent. of oat-bran, from 60 to 70 per cent. of phosphates of calcium and magnesium, and a small percentage of fats and soaps.

[2] THE LANCET, March 2nd, 1901, p. 623.

diet and by excretion into the bowel from the system, and that, on the other hand, uric acid and its compounds are excreted by the kidneys, and to a small extent by the skin, and separate out in those tissues in which the blood-supply would appear to have a greater opportunity of depositing them than would be the case in the intestine. Sluggish action of the bowels is alleged as a cause of intestinal concretions, but this can only be a predisposing circumstance, for the milk diet and the sluggish state of the bowel do not alone appear to be able to bring about the condition of true intestinal sand. All, then, that we can say at present is that the condition would appear to be very closely related to gout and to be favoured by a milk diet.

Clinical Notes:
MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF SPRUE.

BY R. MUZIO WILLIAMS, M.D. LOND.,
AND
M. H. SPENCER, M.D. CANTAB.

WE thought that the following short account of this case might be of interest, more especially as the diagnosis of sprue appears still to be frequently missed, for though the patient had evidently had the disease for some time and had seen at least eight or nine medical men it had never been even suggested as being sprue.

The patient, a woman, aged 42 years, came into a home on May 4th last, having landed from India on the same morning. The only serious illness she had had previously to the present one was an attack of severe diarrhœa 10 years ago which lasted for some months and necessitated her return home from India where she was then residing. During the last four years she had suffered from intermittent diarrhœa, with increasing weakness and emaciation, at times, however, partially recovering for a period and regaining some of the weight which she had lost. The stools were not very frequent—generally only four or five daily—semi-solid, fermenting in character, and of a light yellowish-grey colour. She had complained of a sore condition of the mouth and tongue for some time. In spite of periods of intermission the disease progressed insidiously, and at the time of her return to England she was exceedingly emaciated and in a very feeble condition. During the last month, whilst on her voyage home, the bowels were somewhat constipated and enemata were generally necessary to secure an action.

On admission she was extremely emaciated and profoundly anæmic. The skin was drawn tightly over the face and bony points of the body and was pigmented of a dirty brown colour, the pigmentation being specially marked on the neck and face. The pulse was feeble, 92, and the temperature was subnormal, only on one occasion reaching 96·4° F. The slightest movement caused syncopic attacks. The heart was not enlarged. There were loud blowing murmurs with systole and diastole over the apical region not conducted into the axilla. The spleen was not felt. The liver was felt for two fingerbreadths below the costal margin and the upper margin of dulness commenced at the sixth interspace. The urine contained a trace of albumin. Dr. Patrick Manson kindly examined the blood and reported as follows: "The blood is that of simple anæmia, a few poikilocytes present but nothing like pernicious anæmia." The tongue was white and glazed and completely denuded of epithelium, the buccal mucous membrane was in a similar condition, and there were two small ulcers near the anterior pillars of the fauces. The conjunctivæ were pearly white. She took nourishment fairly well. The following day, after consultation with Dr. Manson, as her pulse was rapidly becoming worse she was infused by Mr. Abbott with two pints of normal saline solution containing one-tenth of a grain of strychnine sulphate and three drachms of brandy. After this her pulse improved a good deal and she expressed herself as feeling much better. Two hours later, however, she had another syncopic attack and died.

A post-mortem examination was made by us 20 hours after death. The body was extremely emaciated, there being hardly a trace of fat left in the tissues. The lungs were entirely free from adhesions, crepitant throughout, but markedly bloodless; there was no trace of tuberculous deposit present in them. There was a small quantity of clear fluid in the left pleural cavity. The heart was somewhat atrophied but, contrary to expectation, the ventricular walls did not show any marked attenuation. There was no naked-eye appearance of degenerative change in the muscle or endocardium; the valves were competent and healthy. The liver, unlike what is generally found in these cases, was somewhat enlarged, greasy and fatty, easily breaking down on pressure with the thumb. The pancreas was firm and rather tough on section, suggesting some fibrotic change. This has been noted in other cases reported. The spleen was small, firm, and pale. The kidneys were firm and markedly anæmic, the capsule peeled readily, and the surface was not granular. The whole intestinal tract from the duodenum to the rectum was extraordinarily thinned. The bowel contained a quantity of slimy mucus. On washing this away the mucous membrane was found to be practically absent. In the small intestine and cæcum the bowel wall was so thinned as to be transparent when held up to the light and so friable as to tear very readily on handling. This diaphanous condition of the bowel was marked through its whole extent but most noticeable in the small intestine and cæcum. In places there were small diverticula formed owing to the extreme attenuation of the walls. They were of about the size of a walnut and could hardly be touched without tearing. The omentum contained scarcely any fat. There was no enlargement of the mesenteric glands. The stomach was dilated and full of undigested fluid; it was thin-walled and perfectly white. There was no ulceration present in any part of the alimentary tract. The pelvic organs were normal with the exception of two small parovarian cysts and there was no sign of previous peritonitis.

A CASE OF DERMATITIS CAUSED BY HUMEA ELEGANS.

BY WALTER CARRINGTON HEARNDEN, M.R.C.S. ENG.

THE following case may be of interest to some of the readers of THE LANCET as it illustrates the difficulty of fixing the cause of certain skin eruptions.

A female patient of mine who has a particularly delicate complexion, has during the last few months been frequently suffering from vesicular eruptions on the nose and cheeks looking like impetigo. They quickly subsided under treatment but as there was an almost immediate relapse she consulted a specialist who diagnosed eczema and naturally ordered a course of arsenic. On June 7th I found her with a red, swollen face, the left eye closed, large vesicles containing clear serum on the cheeks, and a patch of eczema on the left side of the chin. She was greatly alarmed as she supposed that she had erysipelas. Her temperature, however, was normal. She was unable to account for the attack, but first noticed it after playing ping-pong. She had not been handling *Primula obconica* as she was aware of its dangers, but she volunteered the statements that she had been feeding chickens with crushed bones and that she had noticed some irritation about the nose. The attack subsided in the course of a few days under lotio plumbi subacetatis. The first time she went out, at the end of the week when her face was well, she complained of itching of her right eyelid and in the course of a few hours her face was as bad as ever. She then said that she had picked a leaf of *Humea elegans*, and had smelt it and that she had been in the habit during the last few months of picking a leaf and rubbing it on her veil as she liked the perfume. The position of the rash was just where a veil would touch the face and the patch on the chin corresponded to the place where the veil is screwed up and tucked in. No doubt this had been the cause of all the trouble.

Humea elegans, a native of New South Wales, is frequently grown in greenhouses for the sake of its perfume and flowers. The leaves are not unlike those of the tobacco plant in shape but much more shiny and they exhale a strong smell like incense. A leaf rubbed on my

arm left a gummy secretion with a powerful smell and was followed by a bright red punctiform rash which lasted all day but caused little irritation. A gardener has told me that he has noticed his arms itching after moving the plants and that the gardener who gave them to him suffered from a severely inflamed face which was ascribed to an irritating soap but no doubt was due to the humea. It is well known that many plants like *Primula obconica* are irritants, but that *Humea elegans* is one of them was new to me and may be a warning to others.

Leatherhead.

NOTE ON A CASE OF SPONTANEOUS REDUCTION OF ACUTE INTUSSUSCEPTION.

By W. GIFFORD NASH, F.R.C.S. Eng.

A MALE child, aged 11 months, between 12 and 1 o'clock midday on June 4th was seized with abdominal pain which caused screaming and great collapse. Vomiting occurred. I was sent for and saw the child shortly before three o'clock when I found him deathly pale and suffering from extreme collapse. On examining the abdomen a swelling could be seen passing from the region of the cæcum obliquely upwards towards the epigastrium. On palpation a firm sausage-shaped tumour three or four inches in length could be felt. I concluded that an intussusception was present and made preparations for immediate operation. Hot bottles were applied to the extremities and hot flannels to the abdomen. I saw the child again with my partner Dr. H. Savory at 4 o'clock and found him looking much better, having had a sleep. The lump could still be seen and felt, but was evidently smaller and during our manipulations it suddenly entirely disappeared. There was a history of looseness of the bowels on the previous evening.

This appears to be a case in which spontaneous reduction of an intussusception undoubtedly occurred. I am perfectly certain that an intussusception was present. The symptoms of severe shock were very marked and the presence of a very distinct elongated tumour was very easy to demonstrate to the relatives. No doubt the diarrhœa of the previous night led up to the occurrence of the condition. The reasons why the intussusception was reduced appear to me to be three: (1) the manipulations necessary to form a diagnosis acting on a very recent intussusception; (2) the occurrence of faintness and vomiting leading to relaxation of muscular spasm; and (3) the application of heat to the abdomen acting in the same way.

Bedford.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ROYAL FREE HOSPITAL.

A CASE OF EXPLORATION OF THE CEREBELLUM AND DRAINAGE OF A CEREBELLAR ABSCESS DURING ARTIFICIAL RESPIRATION.

(Under the care of Mr. E. W. ROUGHTON.)

THE symptoms of cerebellar abscess, when it is confined to a lateral lobe, are due only in part to the local damage to the cerebellar substance, for it has been shown many times both by experiment and by disease that destruction of a very large part of a lateral lobe of the cerebellum usually gives rise to very few signs or symptoms, while injury of the middle lobe produces the characteristic disturbances of equilibrium. The greater part of the symptoms resulting from cerebellar abscess are caused by pressure on the foramen of Majendie which obstructs the outflow of cerebro-spinal fluid from the ventricles. For the notes of the case we are indebted to Mr. Joseph Cunning, F.R.C.S., senior resident medical officer.

A boy, aged 17 years, was admitted into the Royal Free Hospital under the care of Mr. E. W. Roughton on April 2nd, 1902, complaining of frontal headache and pain behind the left ear. The patient had had a discharge from both ears since an attack of scarlet fever 10 years ago. Six days before admission he had received a "box" on the left ear and since then had had pain on the left side of the head and neck. He was able to work for three days but then he had to go to bed. Poultices were applied and the pain was relieved. On the fifth day he vomited each time after taking food and the pain became worse.

On admission the patient was very delicate, apathetic, very deaf, and quite intelligent, though slow in cerebration. The respirations were 17, the pulse was 48 and regular, and the temperature was 99·2° F. The urine was of specific gravity 1030 and contained no albumin, sugar, pus, or blood. There was tenderness over the left mastoid process and he complained of pain over the forehead, the left side of the head, and the back of the neck. From both ears there was a foul-smelling discharge. On the left side a quantity of thick epithelial débris was removed from the auditory canal and a perforation was seen in the membrane; no bare bone was perceptible. On the right side a small polypoid mass of granulations protruded through a perforation in the membrane. The hearing was: right $\frac{1}{20}$ and left $\frac{0}{20}$.

The patient's condition continued to improve for eight days. His hearing became better, the tenderness over the left mastoid process disappeared, and generally he became brighter. The pulse-rate rose to from 50 to 58 and he had no more vomiting, but the headache, though not so severe, still continued. The temperature all this time remained at 98°. Then the headache became worse and he vomited once daily for two days. On the tenth day after admission he vomited four times. The temperature was 97° and the pulse was 58. His headache was worse. On the twelfth day the headache was very bad. He was still vomiting and now complained of giddiness. For the first time he was unable to lie on the right side as it increased the pain so much. The left knee-jerk was exaggerated; there was no weakness or paralysis of either upper or lower extremities. The pupils were equal and reacted to light, no squint or nystagmus being present. There were no fits or twitchings and there had been no delirium at any time. Cerebellar abscess was diagnosed and as Mr. Roughton was unable to come down he asked Mr. Cunning to operate.

Owing to the severity of the headache Mr. Cunning decided to shave the head and to prepare the scalp after the anæsthetic had been given. The left ear seemed to be the worse of the two and the tenderness when the patient was admitted to the hospital had been on the left side, though it had now disappeared. The left knee-jerk was also exaggerated. In spite of that the inability to lie on the right side had been such a marked feature during the day that it was determined to attack the right side. An injection of morphia (three minims) was given to minimise the amount of anæsthetic necessary. Mr. Sheffield Neave gave chloroform and it was noticed that after about half a drachm had been given the pulse increased in frequency to 120. After a drachm had been given the breathing ceased entirely, while the corneal reflex remained. The heart went on beating. As no attempt at spontaneous respiration occurred, artificial respiration was begun, the tongue being held well forward. The patient's colour remained good and artificial respiration was stopped to see if he would now breathe naturally, but he only steadily became blue, so artificial respiration was recommenced. As Mr. Cunning felt convinced that this condition was due to pressure on the medulla inhibiting the respiratory centre it was determined to go on with the operation. Having to prepare the scalp by scrubbing and shaving was the cause of a good deal of delay, and during this time Silvester's method of artificial respiration could not be kept up. In place of this Mr. Neave knelt on the table and kept up alternate compression and relaxation of the thorax with his hands. As this was not nearly so efficient it was occasionally necessary to delay the operation and to resort to Silvester's method till the colour improved.

A flap of all the soft tissues was turned down over the right side of the occipital lobe to expose an area below the superior curved line and behind the posterior border of the mastoid process, and a piece of bone was removed with a three-quarter inch trephine. The opening was well clear of both the horizontal and the vertical portions of the lateral

sinus. The dura mater bulged into the opening and no pulsation was visible, but pulsation could be felt by pressing in with the finger. The dura mater was then opened and there was very marked protrusion of the cerebellum, demonstrating the high degree of intracranial tension. A pair of fine sinus forceps was introduced in an inward and forward direction for about two inches and again in both an upward and downward direction, each time with a negative result. The wound was rapidly stitched up and a similar opening was made on the left side. A similar bulging of dura mater and cerebellum was found. The sinus forceps was pushed in an inward and forward direction and at a depth of about half an inch from the surface an abscess was opened and thick very foul-smelling pus was evacuated. The forceps on being pushed further gave a sensation to the touch as if it was in a fair-sized cavity. The forceps was opened in withdrawal to enlarge the opening. The moment the pus oozed out it was noticed that spontaneous respiration began and continued from this time onwards, though artificial respiration had previously been necessary for 60 minutes. A rubber drainage-tube was inserted and altogether about two or three drachms of stinking pus were evacuated. A hole was made in the base of the flap, the tube being brought through this and stitched to the skin. The flap was stitched up, the wound was dressed, and the patient was sent back to the ward. The breathing remained somewhat of the Cheyne-Stokes character. The patient became conscious about three hours after, but then had three convulsive attacks, and he died six hours after the termination of the operation.

Necropsy.—At the post-mortem examination it was found that the only abnormal condition in the cranial cavity was a ragged-walled abscess cavity occupying the major portion of the left lateral lobe of the cerebellum. There was no meningitis and no caries or necrosis was perceptible on the intracranial aspect of the temporal bones. There was general enlargement of the mesenteric glands and a patch of lymph was found on the pericardium. No other abnormal condition was observed.

Remarks by Mr. CUNNING.—The reason for calling attention to this case is that the diagnosis of cerebellar abscess is still a matter of difficulty and the localisation is of still greater difficulty. For this reason I think that all cases should be recorded, as each may contribute something to our store of knowledge and help in the treatment of this dangerous condition. There is a feature in this case, also, that, so far as I know, has not been noted before—that the whole operation was performed during the maintenance of artificial respiration and the necessity for the performance of the latter was abolished as soon as the abscess was opened. The interesting points of the case are as follows.

1. The difficulty of diagnosis. For 10 days the patient was under observation and his only constant symptom was abnormal slowness of the pulse. The headache, mental slowness, deafness, vomiting, and tenderness over the mastoid all improved. Then vomiting, subnormal temperature, giddiness, and increased mental dulness came on.

2. The localisation of the abscess. The points given by Acland and Ballance quoted in Jacobson's "Operations of Surgery" are: (1) paralysis of the upper extremity on the same side; (2) conjugate deviation of the eyes to the opposite side; (3) lateral nystagmus; (4) exaggerated knee-jerk on the side of the lesion; (5) a tendency to face towards the side of the lesion in walking; (6) staggering gait and a tendency to fall towards the side opposite to the lesion; and (7) attitude in bed, the patient lying on the side opposite to the lesion. Of these different symptoms, there were absent in the present case paralysis of the arm, conjugate deviation of the eyes, and lateral nystagmus. The patient was never examined as to his gait. So the only localising symptoms were: (1) exaggerated knee-jerk on the left side; and (2) inability to lie on the right side. The former turned out to be accurate but the latter did not.

3. The anæsthetic. The fact of the pulse-rate increasing from 42 to 120 I can only explain as due to pressure on the vagus centre rendering it more easily inhibitable by chloroform than when it is in a normal condition. Whether a different result might have been brought about if no anæsthetic had been given is to be considered. Where there is so much pressure upon the medulla it may be that the depressing influence of the anæsthetic is sufficient to upset the already precariously kept balance. On the other hand, it would not be easy to explore both sides of the cerebellum with local anæsthesia, though it might be worth trying. It has been asserted recently that chloroform always produces heart-failure before respiratory failure. In this case there seems little doubt that chloroform precipitated the respiratory failure without interfering greatly with the action of the heart.

4. The respiration. The beginning and carrying through of the whole operation, in spite of the patient making no attempt at breathing, was amply compensated for by the immediate return of activity in the respiratory centre when the abscess was opened. One other point as to the cause of death is whether the cavity being emptied quickly caused œdema to occur in the medulla oblongata when the pressure was suddenly relieved—whether it would have been better to allow the cavity to empty very slowly so that vessels with their walls paralysed by pressure might have time to recover.

I have to thank Mr. Roughton for his great courtesy in allowing me to make use of this case.

NORTHAMPTON GENERAL INFIRMARY.

A CASE OF THROMBOSIS OF THE CEREBRAL SINUSES FOLLOWING ON CHLOROSIS; RECOVERY.

(Under the care of Dr. P. S. HICHENS.)

THROMBOSIS of the cerebral sinuses occurs in two forms which differ greatly from one another. In one form the coagulation of the blood is produced by septic organisms generally spreading from the middle ear. In this septic variety of thrombosis surgical interference is indicated, for spontaneous recovery is extremely rare. In the other form the thrombosis is due to the increased coagulability of the blood which results from anæmia, and the following case is a good example of it. There can be but little doubt about the diagnosis, for there is no other known condition capable of producing all the signs and symptoms present. For the notes of the case we are indebted to Dr. George H. Lewis, house physician.

A domestic servant, aged 18 years, was admitted into the Northampton General Infirmary on Jan. 10th, 1902, complaining of shortness of breath, palpitation, amenorrhœa, and the other symptoms common to chlorosis. In addition to these she complained of vomiting which for the past two or three weeks had been getting more frequent; she said that on the day prior to admission she had vomited a little blood. With the exception of an attack of chlorosis two years ago her general health had been good. On admission she walked into the hospital and did not appear to be seriously ill. She was somewhat pale but presented no symptoms differing from a case of ordinary chlorosis which is so frequently met with in the out-patient department of any hospital. On examining her chest a loud systolic murmur was heard in the pulmonary area and there was a well-marked bruit in the veins of the neck. There was nothing abnormal in the lungs. The urine was acid, of specific gravity 1018, and contained no abnormal constituents. The history of hæmatemesis was so indefinite that peptonised milk was given in small quantities at frequent intervals and produced no ill effects. Two days after admission (Jan. 12th) the patient complained of severe frontal headache and pain in the left lumbar region. Her temperature rose to 102° F. and the headache became more and more severe. Her face was dull and expressionless, she was slow in answering questions, and she gazed about her with a vacant stare. At one time she was very restless, trying to get out of bed, whilst at another she lay very quiet and helpless. Occasionally she cried out. She vomited twice and gradually passed into a state of unconsciousness, not recognising her relatives and passing her fæces and urine in bed. Her pupils were widely dilated and a specimen of her urine withdrawn by a catheter contained a large amount of albumin. There were no spots on the abdomen suggestive of enteric fever and no enlargement of the spleen was observed. She remained in this condition for about 36 hours when she again began to grow restless, then to recognise her relatives and to show other signs of gradually returning consciousness, and on the 17th (five days after the onset of the headache, &c.) she was able to answer simple questions. She said that she was free from pain in her forehead. She drank her milk readily but still passed fæces and urine in bed. On examining her eyes there was found to be distinct optic neuritis in each eye and a small hæmorrhage was seen below the left optic disc. By the 25th the cerebral symptoms had entirely disappeared

and the albumin had greatly diminished in the urine, there being only a faint trace, but the optic neuritis had slightly increased, especially in the right eye. On the following day she complained of great pain in the right thigh and leg, which was accompanied by a large amount of swelling, presenting a typical example of a thrombosis of the right femoral vein. The temperature, which had been normal for 10 days, rose to 101·6°. The pain and swelling in the leg lasted for a few days and then gradually subsided, and on Feb. 11th all the symptoms of the thrombosis in the femoral vein had disappeared, there was no albumin in the urine, and the optic neuritis had slightly diminished. A fortnight later the optic neuritis had entirely disappeared from the left eye, but there was still some absence of definition of the margin of the right disc, but no distinct exudation and no hæmorrhage into the retina were present. The vision equalled $\frac{6}{6}$ in each eye. The patient made an uninterrupted recovery, the percentage of hæmoglobin rising from 30 to 68 per cent.; the red blood corpuscles amounted to 4,000,000 per cubic millimetre at the time of admission and did not increase or diminish. She was discharged from the hospital on March 15th. She has since attended as an out-patient three or four times and has shown no untoward symptoms, she is no longer short of breath and has no sickness, and menstruation has recommenced.

Remarks by Dr. LEWIS.—After reading Dr. C. O. Hawthorne's interesting article in the *British Medical Journal* of Feb. 8th, 1902, in which he says, "It is certain that double optic neuritis may be included among the symptoms of thrombosis of the cerebral sinuses," I thought that the above case might be worth recording. The chief points of interest are, I think, its extreme rarity when compared with the large number of cases of anæmia in girls, the presence of almost all the symptoms associated with sinus thrombosis—viz., headache, mental dulness, unconsciousness, vomiting, dilatation of the pupils, and double optic neuritis and the occurrence of thrombosis in the right femoral vein. Another interesting point, but one which I am not prepared to account for, was the presence of pain in the left lumbar region associated with a large amount of albumin in the urine which occurred simultaneously with the frontal headache. Professor T. Clifford Allbutt in his "System of Medicine," vol. vi., p. 201, states that of 78 cases of venous thrombosis associated with chlorosis in only six of them was there thrombosis of the cerebral sinuses and of the lower extremities; in 32 of the cases there was no thrombosis of the extremities, only thrombosis of the cerebral sinuses. These figures are apt to make one imagine that thrombosis more commonly occurs in the sinuses than in the extremities, but Professor Allbutt's explanation that "thrombosis of the extremities is far more frequently met with, but in a large number of cases the effects produced are not so serious as to make the case sufficiently interesting for publication" will be agreed to by all.

The thrombosis in the femoral vein had many interesting features in its development when compared with that of the cerebral sinuses; the onset of pain and the similar rises in the temperature indicated that similar changes were occurring somewhere in the system, the mental dulness, headache, optic neuritis, &c., localising the one in the cerebral sinuses, and the swelling of the thigh and the leg localising the other in the femoral vein. The diagnosis of sinus thrombosis is one to which some may take exception, but I do not know of any other condition occurring in chlorosis which would account for the above symptoms; the thrombosis in the femoral vein occurring at a later date seems to me to justify the diagnosis being made.

I am indebted to Dr. Hichens for his kind permission to publish this case.

References.—Douglas Powell, THE LANCET, Dec. 8th, 1888, p. 1124 (hæmic murmurs and left-sided paralysis); Bristowe's Diseases of the Nervous System, p. 184; Duckworth and Buzzard, Brit. Med. Jour., 1896, vol. i., p. 149; and A. G. Phear, Brit. Med. Jour., 1897, vol. ii., p. 1069.

MANCHESTER ROYAL INFIRMARY.—The scheme for rebuilding the Manchester Royal Infirmary on the present site has been submitted to a meeting of the trustees and defeated by a large majority. Lord Egerton of Tatton and others urged the wisdom of building a new hospital in Stanley Grove on the site offered by the Whitworth trustees. A poll was demanded and will be taken by circular.

Medical Societies.

EDINBURGH OBSTETRICAL SOCIETY.

Hæmorrhage during Pregnancy.

A SPECIAL combined meeting of this society with the Glasgow Obstetrical and Gynæcological Society was held in Edinburgh on July 9th, Dr. JAMES RITCHIE, the President of the former, being in the chair.

Dr. ROBERT JARDINE (Glasgow) opened a discussion on Hæmorrhage during the Later Months of Pregnancy and Early Stages of Labour. Unavoidable hæmorrhage arose from the separation of an abnormally situated placenta that was, one entirely or partly attached below the retraction ring. As soon as dilatation began, separation must occur and this separation meant the opening up of sinuses and consequent hæmorrhage. In the central variety the entire placenta must separate and very severe hæmorrhage result; in the lateral variety the greater part of the placenta must separate and severe hæmorrhage also occur; while in the marginal variety when only a small portion was below Bandl's ring the bleeding would not be great. This last was probably more frequent than was supposed and was the cause of slight hæmorrhage in the early stages of labour. In the treatment of unavoidable hæmorrhage, the viability of the fœtus must be considered. If not viable, then palliative measures should be tried, unless the hæmorrhage was very severe. Absolute rest in bed with, perhaps, an opiate and attention to the bowels and diet were all that might be required. Styptics were of no use. The patient and friends must be warned to notify any recurrence of bleeding immediately. Unfortunately many women were so accustomed to large losses of blood that they were not easily alarmed and they might delay until it was too late. If the fœtus was viable and the hæmorrhage was severe, then active treatment must be carried out. The most efficient way to stop the bleeding was plugging. If the os was not dilated, or only slightly, then plugging should be resorted to if possible, inserting one plug into the os, and afterwards the vagina should be packed till it was completely filled. If the os was dilated sufficiently then a Barnes or a Champetier de Ribes bag might be used, but if the os was dilated sufficiently to permit of the insertion of one of these then it would permit of the performance of bipolar version in a head or transverse case so as to bring a leg down into the vagina. In a breech case one leg should be brought down as soon as possible. The plug should be removed in a few hours and the os was usually found dilated to permit of further treatment. Once a leg was down then gentle traction would control the hæmorrhage. The labour should not be hastened after this as forcible traction of the child through an os not completely dilated would produce laceration of the cervix and very serious hæmorrhage owing to its special vascularity in this condition. If the os was quite dilated then delivery should be effected as quickly as possible by version or by forceps. If the placenta was central the hand must be passed through or round it. Stripping off the placenta was useful, as it allowed dilatation of the os to occur more easily. In the marginal placenta prævia the membranes might be punctured and the uterus stimulated by friction till the placenta was pressed on by the presenting part. After the birth of the child if the placenta did not come away at once it should be removed. If post-partum hæmorrhage occurred ergotin should be given hypodermically and pressure applied bimanually. Hot water douching was of questionable advantage as it might wash away the clots out of the sinuses and so promote hæmorrhage. Dr. Jardine had of late been using 30 grains of suprarenal gland to the pint for douching, and it seemed to have a good effect. But if there was any tendency to post-partum hæmorrhage he invariably plugged the uterine cavity, the cervix, and the vagina. Reference was then made to the operation of Cæsarean section in placenta prævia as first proposed by Lawson Tait. Eight cases had thus been treated by Cæsarean section or Porro's operation; five mothers and six children were saved. Two cases were hopeless before operation. But even omitting these two the resulting mortality was much higher than was present in cases treated by the other methods, where there was a mortality of about 1 in 20. The treatment by abdominal section seemed unjustifiable. Accidental

hæmorrhage might be external or internal. In the external if the uterine contractions were active then the membranes should be ruptured and the uterus massaged or a tight binder applied. If the bleeding continued then the uterus should be emptied as soon as possible by turning or by forceps. Dr. Jardine referred to the Rotunda method of plugging and the reasons adduced for its use, but he could not agree with their theory. In these cases the uterine wall was not in a normal condition. If strong contractions were occurring then plugging might be used, but if there were no contractions then there would be great risk of converting an external into an internal hæmorrhage. He had seen one case in which this happened with fatal result. If the hæmorrhage was severe the uterus should be emptied as quickly as possible, the os being dilated by hand or by a Champetier de Ribes bag. As soon as the child was born the hand should be inserted into the uterus and the placenta and clots should be removed. Ergotin should be given and the uterus plugged if post-partum hæmorrhage was occurring. The plug could be wrung out of suprarenal extract solution. A saline infusion should be given if much blood had been lost or if there had been much shock. Concealed internal hæmorrhage was the most fatal of all the forms. Rupturing the membranes would only make more room for blood to be poured out, and delivery by accouchement forcé was not very hopeful if the hæmorrhage was severe. In Dr. Jardine's experience of many cases such treatment was disastrous. He favoured removal of the uterus by Porro's operation. A helpful symptom in diagnosing this condition was that the patient complained of severe pain of a continuous character in the abdomen. If the condition was recognised early then the membranes should be ruptured before there was sufficient bleeding to cause collapse. Another source of hæmorrhage in the early stage of labour might be a commencing spontaneous rupture of the uterus, but it could not be diagnosed till the rupture had occurred, when abdominal section and removal of the uterus should be carried out.

After Dr. ROBERT BARNES (London) had made some remarks on the use of bags as dilators,

Professor A. R. SIMPSON referred to the pleasure that the societies had in hearing the Nestor of British midwifery open the discussion. He referred to the carelessness of women suffering from hæmorrhage. Many of the subjects of placenta prævia suffered previously from endometritis and thus were accustomed to considerable losses of blood, so that the hæmorrhage during pregnancy did not alarm them. He believed in palliative treatment at first, warning the patient to give immediate intimation of any recurrence; if this should occur the active interference should be at once carried out. The worst and most fatal cases were those where there had been repeated hæmorrhages and where only a little was sufficient at last to cause death.

Dr. J. M. MUNRO KERR (Glasgow) referred to his experience in 10 cases. He considered it important to diagnose the variety and apply the treatment accordingly.

Dr. D. BERRY HART considered that the best treatment if the hæmorrhage was severe was to dilate the os rapidly till it would admit two or three fingers; then to perform bipolar version, bring down a foot, and allow the case afterwards to be terminated naturally. By doing this they would save more children than if they hastened the termination of the labour.

Professor J. A. C. KYNOCH (Dundee) considered that the treatment mainly resolved itself into that by bipolar version. The os must be dilated to permit of this being carried out and this could be accomplished by packing or by the use of bags, but he had never required to use these, having always attained this object by digital dilatation. Careful attention should be given to asepsis in all the procedure, as these cases had a special tendency to sepsis. He considered rapid delivery to be disastrous.

Dr. J. HAIG FERGUSON did not consider Porro's operation or Cæsarean section necessary in any case of accidental hæmorrhage. If labour had commenced in such a case he ruptured the membranes and left to nature, applying forceps or turning if afterwards required.

Dr. J. C. HERBERTSON (Glasgow) considered that the treatment had to be modified according to the position of the patient, as if she were of the working class she could not lie in bed for a long period and she would increase the danger by getting up. Such a case would require interference, whereas another in better circumstances would only necessitate watching.

Dr. F. W. N. HAULTAIN remarked that the discussion had revealed a lamentable state of obstetric nomenclature, as was evidenced by the use of the terms "overlapping," "partial," "lateral," &c., for the same condition of placenta. If the hæmorrhage was not urgent he gave the patient the benefit of the doubt and used palliative measures, but he warned the patient of the risk. He considered that the patient should be informed of the condition and be allowed to decide for herself whether she cared to run the risk. Those of the patients who died did so from post-partum hæmorrhage and this often consisted in a steady ooze of blood which pressure and the hot douche would not stop. Plugging was the only method to stop it, and yet there were text-books which taught students not to do so in post-partum hæmorrhage. He supported the treatment of concealed accidental hæmorrhage by abdominal operation.

Dr. ALEXANDER MILLER (Glasgow) had no faith in palliative measures; if the hæmorrhage were severe and the patient near full time he administered chloroform, used digital dilatation, performed podalic version, and delivered the child as soon as possible. The sooner the uterus was emptied the better.

Dr. MICHAEL DEWAR stated that he had only met three cases of placenta prævia in 2000 cases attended in practice. The great point with a practitioner was to distinguish between accidental and unavoidable, and this was not always easy, especially if the os was not dilated and the blood was escaping in considerable gushes.

Dr. S. MACVIE (Chirnside) said that country practitioners considered these cases from a different point of view; there was no cut-and-dry system for them. He did not put the decision of the treatment to the mother but kept her in the dark so as not to put her into an alarming state of nervous excitement. He first palpated the uterus carefully to locate the placenta if possible, as this helped subsequent treatment very much. He dilated the os by the fingers and turned till he got hold of a foot; this when pulled down might stop external bleeding but yet some internal hæmorrhage might be occurring and he felt more satisfied when the body was down. He alluded to the tight packing that had been recommended during the discussion and advised caution, as a neighbour of his had plugged the vagina so tightly in one case as to cause sloughing.

The PRESIDENT referred to the general opinion in favour of plugging in post-partum hæmorrhage. Statistics of the frequency of placenta prævia differed very much and this affected the mortality percentage. He believed that many cases of marginal placenta prævia were overlooked in private practice. The diagnosis of placenta prævia from the examination of the after birth by measuring the distance between the rupture in the membranes and the edge of the placenta was not trustworthy.

Dr. JARDINE, in reply, referred to several cases of placenta prævia which had a previous history of endometritis or curetting and there was probably a causal relation. He always carried out antiseptic treatment very carefully. He thought that a mortality of 23 per cent. was too high; of 150 cases in the Glasgow Maternity he found that the death-rate was 5 per cent. in more recent years and 17 per cent. previously, so that the advance in treatment had influenced the mortality. These cases were often admitted moribund into hospital and swelled the mortality. He adhered to his opinion in advising Porro's operation in cases of serious concealed hæmorrhage. There might be placenta prævia cases converted into concealed by internal hæmorrhage; but whatever the cause if the uterus was so dilated that the walls seemed ready to burst he considered operation to be the woman's best chance. He had not yet operated in such a case but he intended doing so in the next one as in all such cases which he had met the patients had died under other treatment.

Dr. A. W. RUSSELL and Dr. G. BALFOUR MARSHALL (Glasgow) also joined in the discussion.

The Fellows afterwards dined together.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—A meeting of this society was held on July 11th, Dr. J. Macintyre, the President, being in the chair.—Dr. V. H. Wyatt Wingrave read notes of a case of Bilateral Adductor Paralysis in a boy, aged 7 years.—Mr. Lennox Browne inquired if adenoids were present or if there was any symptom pointing to reflex disturbance.—Dr. J. Dundas Grant said that he had seen the patient and had found the larynx to be normal in every

respect. He regarded the case as one of hysterical aphonia.—Mr. E. Dennis Vinrace asked if there had been a tendency to relapse.—Dr. Wingrave, replying, said that he had removed adenoids. One application of the interrupted current quickly restored the voice.—Mr. Lennox Browne read notes of a case of Keratosis of the Tonsils without Leptothrix in a young adult. He had removed the tonsils, of which Dr. Wingrave now showed microscopical sections.—Dr. Wingrave described two varieties of Tonsillar Keratosis; one in which the horny growth projected through the open mouth of the crypt; the other where, the orifice being closed, the horny epithelium formed a "perle" in the lacuna.—Dr. Grant remarked that the condition was apt to disappear without apparent cause.—After some observations by Mr. W. J. Chichele Nourse, Dr. W. Jobson Horne, and the President, Mr. Lennox Browne and Dr. Wingrave replied.—Dr. W. H. Kelson showed a case of Tuberculous Tracheitis. The patient, whose two brothers died from phthisis, had congestion of the larynx and ulceration at the upper and anterior part of the trachea. The sputa contained quantities of tubercle bacilli.—Dr. Kelson also read notes of a case of Singer's Nodes on both Cords in a choir-boy.—Dr. Grant showed a case of Congenital Papillomata of the Larynx in a female, aged 23 years, who had worn a tracheotomy tube from infancy until the time that she consulted him four weeks ago. Her voice then resembled that of functional aphonia. The lips and tongue moved but there was no phonation. Dr. Grant removed the papillomata with forceps and snare and cleared the larynx, so that the patient was able to breathe through the natural channel. Later he closed the tracheal wound. The patient had now a fair voice.—Mr. Lennox Browne congratulated Dr. Grant upon the result. The patient, who was before voiceless, could now utter a good vowel sound. He could recall only one similar case. In that instance it was some time after the removal of the papillomata before the patient was able to speak.—Dr. Kelson pointed out that the case was evidence in support of the view that tracheotomy alone was not curative in cases of papillomata of the larynx.—After a few remarks by the President Dr. Grant replied.—Dr. Grant also showed a Bent Glass Tube of a useful form devised by Dr. Leduc of Nantes for enabling a patient to apply remedies in the form of powder to his own larynx.—The President showed: 1. Photographs of the new electrical department at the Glasgow Royal Infirmary. Besides apparatus for x rays and high frequency currents and a very large static machine there was a huge and very powerful electro-magnet for removing foreign bodies from the trachea, &c. 2. Photographs of a case of Cancer of the Nose in a woman, aged 60 years. Two months ago an old wart took on a very rapid growth. On removal of the external mass it was found to have penetrated the cartilage and to be invading the tissues inside the nose. The case was now under treatment by the x rays.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The summer meeting of this society was held at St. Bartholomew's Hospital Medical School on July 3rd and 4th, Mr. C. B. Lockwood, the President, being in the chair. The meeting, which was well attended both by the London and provincial members, commenced each day at 3 P.M. Amongst the visitors present was Professor Fürst of Lund, Sweden. The following communications were brought before the notice of the society:—Dissections of Two Twin Monsters, with lantern illustrations and specimens, by Dr. R. J. A. Berry (Edinburgh); Flexor Carpi Radialis of an Elephant showing Great Development of Elastic Tissue, by Mr. R. H. Burne; a specimen showing a Band formed by a Persistent Vitelline Artery, by Mr. R. C. Bailey; Two Hearts showing peculiarities of the Great Veins, by Dr. D. N. Nabarro; the Relations of the Deeper Parts of the Brain to the Surface, illustrated by specimens, photographs, and lantern slides, by Professor J. Symington (Belfast); a lantern demonstration on the Extent to which Lumbar Segments of the Body have been transmuted to Sacral in the Evolution of Man and the Higher Primates, by Dr. Arthur Keith; Vestigial First Rib, by Professor Macphail (Glasgow); a Minimal Form of Fissura Facialis, by Mr. N. B. Harman; Some Points on the Topographical Anatomy of the Thoracic and Abdominal Viscera in Hylobates Hainanus, by Professor C. J. Patten (Sheffield); exhibition of the Skull and other Bones from a case of Acromegaly, by Professor A. F. Dixon (Cardiff); a preliminary communication on the Development of the Pericardium, by Professor Arthur Robinson; the Sternal Angle in Man, by Dr. Walter Kidd; the Form of the Human Spleen, by Mr. R. K. Shepherd (Cardiff). On the morning of July 3rd the members and visitors made a formal visit to the museum of the Royal College of Surgeons of England to view the new museum specimens. Mr. R. H. Burne kindly received them and showed the recent additions which had been made to the museum. In the evening the annual dinner was held at the Café Royal, Regent-street, and was attended by upwards of 40 members and guests. Amongst the latter were Sir W. S. Church, Mr. A. Willett, Mr. H. T. Butlin, Professor Haddon, Mr. F. G. Hallett, Dr. J. Calvert, and Professor Fürst. The dinner was one of the most successful that has been held by the society. Through the kindness of the officers of the Zoological Society of London arrangements were made for a visit to the Zoological Gardens, Regent's Park on the morning of July 4th, when the members of the society had the special advantage of being accompanied by Mr. Frank Beddard, F.R.S. After a tour of the gardens had been made the provincial members and guests were entertained at luncheon by the London members of the society. In the evening the President entertained the provincial members at dinner.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society was held on July 16th, Dr. J. H. Stowers, the President, being in the chair.—Dr. A. Eddowes showed: (1) a case of Dysidrosis in the form of Erythema Exudativum (a private patient); and (2) a case of Bullous Eruption.—Dr. T. D. Savill showed a case of Hebra's Prurigo.—Dr. E. G. Graham Little showed: (1) a Case for Diagnosis; (2) a case of Acne Scrofulosorum; and (3) a case of Lichen Hypertrophicus with extensive lesions of the mucous membrane of the mouth.—The President showed cases of (1) Lupus; (2) Lupus Erythematosus; and (3) Alopecia.—Dr. E. Stainer showed: (1) a Girl, aged 12 years, with Linear Papilloma of the Arm; and (2) Tuberculide Eruption on the legs of a boy, aged nine years.—At the annual meeting the following officers were elected:—President: Dr. Stowers. President-elect: Dr. H. Waldo. Vice-Presidents: Dr. P. S. Abraham, Dr. R. L. Bowles, Sir Alfred Cooper, Dr. H. Radcliffe Crocker, Sir G. F. Duffey, Dr. James Galloway, Dr. A. J. Harrison, J.P., Dr. Robert Liveing, and Dr. H. H. Phillips-Conn. Treasurer: Dr. W. T. Freeman. Council: Dr. W. Beatty, Dr. H. A. G. Brooke, Dr. A. Eddowes, Dr. A. J. Hall, Mr. T. J. Hitchins, Dr. Graham Little, Mr. George Pernet, Dr. Leslie Roberts, Mr. G. W. Sequeira, Dr. R. Travers Smith, Dr. Stainer, and Dr. C. H. Thompson. Secretaries: Mr. Arthur Shillitoe and Dr. Wilfrid B. Warde.

Reviews and Notices of Books.

Ophthalmic Myology: A Systematic Treatise on the Ocular Muscles. By G. C. SAVAGE, M.D., Professor of Ophthalmology in the Medical Department of Vanderbilt University. Nashville, Tennessee: Published by the Author. 1902. Crown 8vo. Pp. 589.

THE study of the actions of the extrinsic muscles of the eye has been pursued of late years with remarkable energy and enthusiasm by the Americans and the writings of Stevens, Duane, Swan Burnett, H. Wilson, Culbertson, Reber, and many others have done much to elucidate our knowledge of these muscles and to explain the consequences of their excessive and of their defective power, the appreciation of which has an important bearing on treatment. About the middle of the last century it was customary to perform a tenotomy upon almost every case of squint that appeared amongst the out-patients of a hospital, and though doubtless many cases proved fairly successful there were others in which the results were disastrous, the patient leaving the hospital with a disfigurement greater than that from which he had expected to be relieved. In course of time the study of the refraction of the eyes, of the form of the globe, of the pathological conditions in the interior of the eye, as well as of the extrinsic neuro-muscular apparatus, aided by considerable improvements in the methods of operation, has materially assisted the surgeon in selecting appropriate cases

for operation and has enabled him to feel some confidence in the good effects which he can promise to the patient.

A precise knowledge of the action of the muscles is fundamental and Dr. Savage deals with these actions at great length and with considerable originality. The reader must not expect to find any anatomical or histological details in regard to the muscles of the eye. There is only a broad description of their attachment, the author dealing entirely and exclusively with their action. To abbreviate circumlocution a new nomenclature has of late years been introduced and is now constantly employed, embracing such terms as "esophoria," "exophoria," "hyperphoria," "cataphoria," "cyclotropia," and "cyclophoria," terms to which no exception can be taken since they are legitimately formed and precise. The earlier pages of the volume are occupied with the planes and axes of the eye, the explanation of single vision with two images, and the nature of the horopter, which, he thinks, would be more correctly designated the "monoscopter," since it signifies the circle of binocular single vision.

The mode in which Dr. Savage deals with the defects of the ocular muscles may be illustrated by a reference to his chapter on Exophoria. This condition, which is not quite equivalent to that formerly termed "external squint," is here defined to be "a *tendency* on the part of the external recti muscles and their synergists to make the visual axis deviate from the point of fixation." Now exophoria may be of two kinds, intrinsic exophoria or pseudo-exophoria, or the two conditions may be associated. In intrinsic exophoria the external recti overpower the internal recti either owing to their superiority in size or their more advantageous insertion or to the greater functional activity of their nerve centres; and to determine the treatment that is required it is necessary to distinguish between sthenic and asthenic exophoria. "Exophoria with abduction of less than 8° and abversion of less than 50° is asthenic and clearly indicates that the externi should not have their tension lessened and just as clearly indicates that the interni must have their tension increased. Exophoria with abduction taken with the prism or phorometer of more than 8° and abversion taken with the perimeter of more than 50° is sthenic and the case should be treated with the view of lessening the tension of the externi." In view of the disastrous results of operation in some imperfectly understood cases rules like this, though they may require modification in particular instances, are of considerable value and a great advance on the haphazard mode that was formerly in use.

Dr. Savage has arrived at the conclusion that "all tests for lateral heterophoria are wholly unreliable within the first few hours after eyes have been brought under the influence of a mydriatic" and he makes out a good case in support of his view. The mydriatic, he says, acts on the peripheral extremities of the accommodative nerve fibres, and not on the accommodative centre which remains susceptible of excitation by the demands upon it from the guiding sensation. With the enforced rest of the muscles of accommodation the retinal images become progressively less distinct. The guiding sensation calls on the accommodative centre for sharper images, and the impulse is sent out but finds the muscles irresponsive. Stronger efforts are made and still without effect, but for every degree of activity thus excited but not carried into effect by the accommodative centre there is a corresponding *tendency* to activity, generated in the converging centre, and this centre calls into action, into abnormal action, the internal recti; as soon as the guiding sensation is robbed of its restraining power by the test for heterophoria an increased pseudo-esophoria is shown.

In his account of the operation of tenotomy after enumerating the usual instruments he recommends one that has just been devised by Dr. George H. Price of Nashville and named the "tendonometer," which consists of a hook that can be passed under the tendon and a graduated shaft suspended by a coil spring in a hollow metal handle. It is claimed that by means of this little instrument the resistance of each of the ocular muscles or of uncut fibres when a partial tenotomy is being done can be estimated.

Dr. Savage's work as a whole presents many features that are novel, especially those dealing with the obliquity of the images in cases of oblique astigmatism which are well worthy of perusal, and the lines of treatment he suggests are always sensible, but it is hardly a book from which a student will derive much advantage. It is adapted for the teacher and will accomplish its end if it leads him to think over the difficult problems connected with troubles of the ocular muscles.

The Earth in Relation to the Preservation and Destruction of Contagion. Being the Milroy Lectures delivered at the Royal College of Physicians in 1899, together with other papers on Sanitation. By GEORGE VIVIAN POORE, M.D., F.R.C.P. Lond., Professor of the Principles and Practice of Medicine, University College, London; Physician to University College Hospital. London: Longmans, Green, and Co. 1902. Pp. 257. Price 5s. net.

DR. POORE in his brief preface says that he feels no excuse is needed for the republication of the lectures and papers included in this volume, for they deal with subjects of national importance. The book, as stated on the title page, contains the Milroy Lectures of 1899, an address on Enteric Fever which was delivered before the Royal Medical and Chirurgical Society, and four papers on other subjects. Although the substance of these lectures and addresses may be familiar to readers of THE LANCET, many of them will welcome their republication, and we particularly recommend the book to medical officers of health in rural districts and to country practitioners. Dr. Poore has for a long series of years conducted experiments in regard to the treatment of house refuse (using the term in its widest sense) and all he says on the subject is of great interest. Year by year the problems connected with drainage and water-supply are giving more trouble throughout the country and nothing can be more extravagant in cost and more prejudicial to health than many of the ill-devised and badly-executed drainage schemes which are being carried out in all parts of England. Probably no one would deny that in such a city as London a system of underground drainage is the best arrangement possible and is, indeed, the only one practicable. It does not therefore at all follow that such a system is the best for all places and there is no doubt whatever that sufficient attention has not hitherto been given by professional sanitarians to the subject which Dr. Poore has made his special hobby. Dr. Poore sums up as the chief articles of what he calls his "sanitary faith" as being the firm belief that the protection of the purity of water-supplies should be effected by properly tilling the humus. "I believe," he says, "that organic filth of all kinds should be kept upon the surface to nourish the humus and not be placed beneath it to endanger the wells, and I believe that the great cause of the modern increase of enteric fever has been the water-closet which has fouled, and is still fouling, our sources of water." Dr. Poore speaks almost enthusiastically of the old-fashioned privy and points out some of its chief merits—as, for example, that it "sometimes was big enough to accommodate three people at once, was furnished with a special seat for children" (which he specially commends as an excellent arrangement), "and sometimes had a courtyard of its own." The chief practical objection to the modern earth closet is that it is extremely difficult to get it properly attended to. In this particular Dr. Poore appears to have been fortunate and the gardener he employs must, we are inclined to think, either be an enthusiast for the "earth

system" or else he must take a special delight in the growth of cabbages, which, as Dr. Poore quite truly points out, grow exuberantly when dressed with night-soil.

It may be hoped that the sanitary officers in charge of the camps on Salisbury Plain will accept in good part the criticisms and will adopt the suggestions which the author gives as to the disposal of the refuse of the camps. The Wiltshire downs were lately amongst the healthiest places of England and it would be scandalous if their sanitary state should be reduced to the Aldershot standard. Dr. Poore has done an undoubted and a great public service in calling attention to this question.

More than one of the shorter papers contained in this volume deserves a larger space than it is possible to give to it in a brief review. We are not in accord with Dr. Poore on every point; it is obvious, for example, that his criticisms of the investigations on tabes mesenterica made by the late Sir Richard Thorne are open to objection. The book is an extremely suggestive one and is pleasantly written. It contains a sufficient number of illustrations to explain the text and amongst the most interesting of these are several plans of the sanitary arrangements of an experimental cottage which the author has built near Andover in Hampshire, just outside the boundaries of the borough. The site was chosen to escape from "possible hindrances and prohibitions" which it was thought the model by-laws of the Local Government Board might cause within the area in which they were in force. The sanitarian found it wise to evade sanitary control. This gives food for reflection.

LIBRARY TABLE.

Atlas of Practical Elementary Zootomy. By GEORGE B. HOWES, LL.D., F.R.S. London: Macmillan and Co. 24 Plates and Text. Price 10*s.* net.—This new edition of an atlas brought out by the author to illustrate a number of types required for many examinations differs from the first edition in that the botanical part has been entirely dropped; hence the name has been altered from "biology" to "zootomy." The drawings are largely the same, but there are alterations and additions demanded by our growing knowledge of the animals whose structure is delineated. The book is little more than an Atlas with mere explanations of the figures. The author gives as notes a considerable amount of information concerning recent research, and heads the work with a brief bibliography of such treatises as will be found most useful to the student who desires not to limit himself to an elementary conception of the facts before him. The bibliography is particularly well arranged and thoroughly up to date. The plates are of exactly the same standard of excellence as were those of the earlier edition, but a good many new figures have been interpolated and others have been slightly altered. The alterations and additions are for the most part upon those plates which refer to the frog and to the earthworm. It is, perhaps, mainly in these two animals that recent progress has been most active and correction and addition therefore rendered essential to the learner. After the most careful examination of the drawings we have not been able, as indeed was to have been expected, to find any positive errors. There are, however, one or two figures to which we take exception on various grounds. In Fig. 9 of Plate XIV. the oviducal funnel of the earthworm is made to look very different from the corresponding funnels of the sperm ducts, while the receptaculum ovorum, which is of course a chamber containing eggs and the probable homologue of the sperm sacs, is made to look rather like a funnel turned backwards. The abundant lettering which serves as a guide to the drawings will, however, render any danger arising from this slight confusion quite impossible. In presenting the student with this useful aid to his studies the author naturally points out that the 30 years' experience of the "Huxleyan Type System" has been its best justification and that being the case it is right for the student to get at his facts as much as possible for himself. To do so renders the subsequent lectures of more value. The volume before us should remove all difficulties from the student's path.

The Royal London Ophthalmic Hospital Reports. Edited by W. LANG, F.R.C.S. Eng. Vol. XV. Part 2. May, 1902. London: J. & A. Churchill. 8vo, pp. 106.—The articles contained in this part are: 1. The Nerve Supply of the Lacrymal Gland, by J. Herbert Parsons, F.R.C.S. Eng. In the course of his observations on this subject the author considers that whilst it cannot be regarded as settled there is yet a sufficient amount of evidence in favour of the facial nerve being the secretory nerve of the lacrymal gland to cast much doubt upon the generally received view in favour of the trigeminal. Reference is made to numerous cases in which there was deficient action of the lacrymal gland with lesion of the seventh nerve. 2. A case of Sympathetic Inflammation affecting the Posterior Part of the Uveal Tract, by J. Herbert Fisher, F.R.C.S. Eng. 3. Cases and Observations, by E. Nettleship. These include an account of some cases of temporary blindness from exposure to cold wind; some cases of Berry's hyperplastic subconjunctivitis; some cases of partial albinism; a case of uniocular spasm of accommodation; and cases of retrobulbar optic neuritis. 4. Cases of Mesoblastic Tumours of the Orbit, by A. Quarry Silcock and C. Devereux Marshall. 5. Arcus Senilis, by J. Herbert Parsons, curator of the Ophthalmic Hospital Museum. The conclusion arrived at by Mr. Parsons is that the arcus senilis is probably a peculiar form of fatty degeneration of the substantia propria of the cornea. 6. A Report of the Cases in which Haab's Magnet was Used for the Extraction of Foreign Bodies from the Eye at the Royal London Ophthalmic Hospital, by A. Ferguson MacCallan, F.R.C.S. Eng. 39 cases are reported with varying results. It is shown that the removal of a foreign body from the vitreous is far more difficult and more dangerous to vision than its removal from the anterior chamber, iris, or lens.

Laboratory Work in Histology. By G. CARL HUBER, M.D., Junior Professor of Anatomy and Director of the University of Michigan. Third edition, revised and enlarged. Ann Arbor, Michigan: George Wahr. 1900. 8vo, pp. 204.—Every student requires a guide to histology. The examination of fresh tissues, the methods of isolating, fixing, hardening, decalcifying, injecting, embedding, cutting, and staining all require exposition and the means of accomplishing them do not come by nature. The work is divided into two parts: the first describes the technique of the microscope and the methods at the disposal of the student; the second discusses the several tissues and the way in which they should be treated. The author very truthfully observes that there is a tendency at the present time to rely upon the newer and more complicated methods of research and to disregard or to belittle the rough-and-ready methods of the older observers. The student should, however, be early led to recognise that important observations may be made with the unaided eye and with simple lenses on tissues removed for such study without further preparation and he should be particularly instructed and encouraged in the examination of fragments of tissue obtained by careful teasing out of larger pieces by means of needles and the scalpel. "A better idea," he goes on to say, "of the shape, size, and normal appearance of tissue elements can often be obtained in this way than from sections of tissues prepared after the most approved methods," with all of which we cordially agree. The following quotation of the mode of examining heart muscle will show how the author deals with each subject. "1. Isolated heart-muscle cells.—Small pieces of the cardiac muscle of a dog should be macerated in a 30 per cent. solution of caustic

potash for 15 minutes; the maceration is then to be interrupted by placing the tissue in a saturated aqueous solution of potassium acetate. Tease in gum glycerine. Observe the short oblong cells, one end usually branched. The cells show a cross and longitudinal striation and possess one, occasionally two, oval nuclei. Draw several as seen under high power." It is to be observed that two or three blank pages are intercalated in the text on which the student may make, and thus preserve, his sketches. "2. Section of heart muscle.—Small pieces from the ventricles of the human heart should be fixed in Zenker's fluid, embedded in celloidin, sectioned and stained in hæmatoxylin and eosine; mounted in balsam, and studied under low and high powers. Note how the cells are cemented into fibres and then into anastomosing bundles. In cross sections of the muscle the nuclei are seen occupying the centre of the cells. Sketch as seen under high power." The attention of the student might perhaps have been called to the absence of a sarcolemma and the size of the elements might have been mentioned. A great number of stains are given, of which may be mentioned: Böhmer's hæmatoxylin solution, Mayer's acid hæmalum solution, Ehrlich's hæmatoxylin solution, Heidenhain's hæmatoxylin solution, Heidenhain's iron-lack-hæmatoxylin solution, Grenacher's borax carmine solution, Grenacher's alum solution, Orth's lithium-carmine solution, Orth's picro-lithium carmine solution, Czocor's alum-cochineal solution, a large number of aniline stains, Ehrlich's and Bizzozero's gentian-violet solution, various modes of double staining as by van Gieson's acid fuchsin-picric acid solution, Weigert's picro-carmine, Rawitz orange G and hæmatoxylin, Stroebe's aniline-blue and safranin, and many others. Dr. Huber's book will prove a useful addition to any laboratory.

Analytical Records
FROM
THE LANCET LABORATORY.

BYNO CASCADA.

(ALLEN AND HANBURYS, LIMITED, BETHNAL-GREEN, LONDON, E.)

As the name to some extent implies this preparation is a combination of liquid malt extract (bynin) with *Rhamnus purshiana*, to which has been added *Rhamnus frangula*. It appears that the addition of a certain proportion of extract of frangula bark is useful in re-establishing the aperient effect of cascara in patients who have become habituated to it. We find that the preparation is not disagreeable to the taste and it exhibits a marked digestive effect upon starch. The combination is useful as a laxative, the liquid malt contributing to the action and at the same time helping the powers of digestion. Whilst producing a satisfactory aperient action there is no griping effect.

ELIXIR OF THE GRANDE CHARTREUSE.

(AGENCY, H. RIVIÈRE, 25, CRUTCHED FRIARS, LONDON, E.C.)

This elixir has an origin and history resembling that of the celebrated liqueur of the Grande Chartreuse. The recipe, it is stated, was given in 1607 to the Chartreuse of Paris, but the monks of this monastery, owing to the difficulty of procuring the Alpine plants, handed it over to the Grande Chartreuse in 1735. Later "the brother Jèrome Maubec, qualified by a manuscript of the time as a very skilful apothecary, modified and brought to perfection the first formula." The elixir presents the same colour as the so-called green Chartreuse and when examined by the spectroscope exhibits absorption bands peculiar to chlorophyll. So far as our examination has gone we were not able to trace any but vegetable colouring matters. Our analysis gave the following results: alcohol, by weight 52·23 per cent., by volume 60·07 per cent., equal to proof spirit 100·27 per cent.; residue, chiefly sugar, 11·29 per cent.; and mineral matter, 0·03 per cent. The elixir gives an agreeable sensation of warmth in the stomach and the aromatic oils present serve as carminatives. On this account the elixir has been used in indigestion and flatulence, while it is regarded also as a cardiac tonic and febrifuge.

COCOA POWDER.

(A. DRIESSEN, ROTTERDAM; DE BEER BROTHERS AND COMPANY, 28, MINORIES, LONDON, E.C.)

The features of this preparation calling for remark are its excellent flavour and degree of solubility. The results of the analysis, which are normal, were as follows: moisture, 3·98 per cent.; mineral matter, 6·42 per cent.; alkalinity reckoned as potash, 2·54 per cent.; and fat, 34·80 per cent. The particular method of preparation of this cocoa is calculated to render it easily assimilable and digestible, while the aroma and flavour characteristic of good cocoa are preserved.

EVIAN (SOURCE CACHAT) WATER.

(AGENCY, E. GALLAIS AND CO., LIMITED, 90, PICCADILLY, LONDON, W.)

Evian-les-Bains is picturesquely situated in the Upper Savoy on the Lake of Geneva opposite to Lausanne. The water is remarkable for its organic purity. It contains trifling amounts of carbonate of soda, common salt, and carbonate of lime. The total mineral contents, according to our analysis, do not exceed 23 grains per gallon and these consist chiefly of carbonate of soda with a little salt and calcium carbonate. The water is used for its diuretic properties. A continued course of the water is said to favour the action of the digestive processes and to be an advantage in hepatic disorders.

VARIOUS SOAPS.

(J. F. MACFARLAN & CO., EDINBURGH; AND 9, AND 11, MOOR-LANE, FORE-STREET, LONDON, E.C.)

These soaps give evidence of careful preparation and the choice of special ingredients both for the soap basis and for the medicament. According to our examination the soaps are superfatted and it is stated that the fats used for the purpose are edible. We could find no evidence of alkaline excess or of the presence of irritants. The specimens were as follows: lysol 5 per cent., ichthyol 15 per cent., carbolic acid 10 per cent., lanoline and "cream skin" soap. The last two are very pleasant to use, giving a smooth creamy lather without waste.

ODOL.

(ODOL CHEMICAL WORKS, 26, SOUTHWARK-BRIDGE-ROAD, LONDON, S.E.)

Odol is intended as an antiseptic mouth-wash and consists, according to our examination, of a spirituous, fluid turning milky on the addition of water. The milkiness proved to be due to the presence of an oil, a definite compound of phenol, and salicylic acid. The two constituents are easily separated on saponification by soda. Odol is powerfully antiseptic and forms an agreeable and effective mouth-wash. It possesses a smell recalling oil of peppermint.

NOBES DISINFECTANT.

(THE NOBES DISINFECTANT CO. AGENCY: CAMPBELL, SHEARER, AND CO., 4, EASTCHEAP, LONDON, E.C.)

The most powerful germicide known is probably formaldehyde which is the most important constituent of this disinfectant fluid. The fluid is pink in colour and exhibits a slight fluorescence. On evaporation to dryness a solid residue was obtained amounting to a little over 1 per cent. This residue evolved formaldehyde when heated. The preparation is, of course, not only an effective germicide

but a deodorant also. Moreover, formaldehyde may be successfully used for aerial disinfection.

"TABLOID" LITHIUM CITRATE AND SODIUM SULPHATE (EFFERVESCENT).

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL-BUILDINGS, LONDON, E.C.)

The tabloid lithium citrate and sodium sulphate is of about the size of a shilling piece but of three times the thickness. When placed in water it dissolves with abundant disengagement of carbonic gas, yielding a medicinal and refreshing draught. The combination of a small dose of a saline purgative with lithium citrate is obviously called for in some conditions. One tabloid contains 30 grains of sulphate of soda and five grains of citrate of lithium.

PAUTAUBERGE SOLUTION (CHLORHYDRO-PHOSPHATE OF LIME AND CREASOTE).

AGENCY: WILCOX AND CO., 49, HAYMARKET, LONDON, S.W.

This combination of creasote with phosphate of lime and hydrochloric acid has been proposed for the treatment of bronchial catarrh and pulmonary tuberculosis and instances are cited in which while creasote could not be tolerated or else did little good this form gave favourable results. Pautauberge solution is of the colour of a dilute solution of perchloride of iron with a marked taste and odour of creasote. On the addition of an alkali such as ammonium hydrate the calcium phosphate is precipitated. Good results in various affections of the respiratory organs are recorded in French clinics. The preparation is a decided pharmaceutical success in presenting creasote in a far less objectionable form than is commonly the case and its association with tonics is another advantage.

BERI-BERI.

PROFESSOR UCHERMANN'S VIEWS.

AT a meeting of the Norwegian Scientific and Literary Society held at Christiania on May 30th Professor Uchermann gave an account of the results of the investigations of the committee appointed for the consideration of Beri-Beri and showed that the problem had been solved as far as was possible until the poison itself was determined. He briefly noticed the distribution of the disease, its pathological anatomy, and the supposed causes—causes which might be classed under the two heads, indirect or disposing and direct or initiating, both, however, being equally doubtful and unproved. He then mentioned the various theories founded thereon, the most important of which were the following: (1) that beri-beri was an infectious disease due to a specific microbe; (2) that it was a constitutional disease due to inadequate or physiologically insufficient food, especially the want of azote (albuminates) and fat; and (3) that it was due to an intoxication through the food, some considering it a rice intoxication and others a fish intoxication, those articles undergoing chemical changes possibly through the action of micro-organisms. Others considered it to be an auto-intoxication, the ptomaines of the food and of the intestinal canal being absorbed; while yet others thought that it was an intoxication due to the presence of inorganic poisons, especially arsenic, in the food. None of these theories explained in a satisfactory way the appearance in late years of the disease in Europe and especially on European sailing ships, Norwegian among the number. Hitherto there had not been placed before the public any collective material from which to judge of the causes of beri-beri on ships, but only isolated cases that had been criticised from the standpoint of the more varied experience drawn from India, Japan, and Java.

The material before the committee was based on the replies to certain questions made through consuls or received by members of the committee from master mariners and sailors, the information being obtained from 104 ships in all. These facts enabled a person for the first time critically to weigh the various views that could be entertained concerning the causes of beri-beri in ships. It was evident (1) that the general opinion in dating the appearance of beri-beri on Norwegian ships to the last decade of the late century and its especial prevalence after the year 1895 was correct; (2) that the Norwegian ships and, as far as the small number allowed a conclusion to be drawn, Scandinavian and Finnish ships were most attacked, the German ships coming next in the proportion of cases, while the English ships suffered very little; (3) that the disease appeared to be most common on sailing ships (of the 104 ships attacked there was but one steamer and that had one patient); (4) that the great majority of the opinions expressed tended to the belief that inadequate food, and especially much tinned food, directly produced beri-beri or indirectly furthered it; (5) that the drinking water could not be the cause of it; (6) that the disease had appeared on ships where rice had neither been used nor had been on board at all; (7) that the partaking of tinned food was not necessarily followed by an appearance of want of nourishment in the patient; (8) that lime-juice was not a sure prophylactic against beri-beri, though it might exercise a certain preventive influence against the disease or occasionally a favourable influence on its course; (9) that the foregoing conclusion held good also with regard to fruit and fresh vegetables, especially potatoes; (10) that beri-beri appeared on sailing ships on long voyages, though they had departed from a region free from beri-beri (this was the case with 10 ships) and though the disease had not previously appeared on board nor the crew previously had the disease; (11) that there was no indication of any rule for the time of the incubation of the disease, such time varying from the first to the 120th day after leaving port; (12) that the hydropic form of the disease was the most common in the ships (only three or four cases of the atrophic form were mentioned), while in Japan it hardly amounted to one-half the cases; (13) that the disease was afebrile; (14) that animals were also attacked; (15) that in several cases vomiting appeared at the very beginning of the disease but stopped immediately the patients went on board another ship and got different food; (16) that, generally speaking, fresh provisions in the form of meat, fruit, and fresh vegetables in a short time cured the disease in the vast majority of cases, when it was not too far advanced; and (17) that symptoms resembling scurvy did not appear.

After a critical examination of the theories Professor Uchermann concluded that beri-beri was the Oriental name of multiple neuritis and was due to a toxin intoxication by tainted vegetable or animal food. The vegetable form closely corresponded with the Asiatic beri-beri and was usually owing to the eating of tainted rice. The animal form corresponded particularly with the beri-beri which appeared on European sailing ships and was due chiefly to the eating of tainted tinned food. It might indeed be supposed that the beri-beri poison might appear not only in vegetable but also in animal nitrogenous food stuffs that were, or had been, undergoing decomposition of a microbic nature as yet undecided. These microbes were probably not specific, and in all likelihood were different in the animal and vegetable forms of the disease. Nor need the poisons themselves, from a theoretical point of view, be absolutely identical in both forms, even if they were in all probability homogeneous and in some degree isodynamic. As to the importance of lime juice, potatoes, &c., it might be supposed that the vegetable acids contained in these articles of food entered into compounds with the toxins, generally basic, rendering them innocuous or making them more easily secreted. In accordance with these conclusions the committee advised: (1) a restriction in the use of tinned food (according to French investigations of the various kinds of tinned food from 70 to 80 per cent. contained viable microbes); (2) that fat should be made a component part, even if a limited part, in the scale of diet in warm climates; (3) that potatoes and fresh vegetables should be provided for the whole voyage, ships being provided with a better system of preserving these articles; (4) that fresh fruit and fresh provisions should be used during the stay in port; (5) that on long voyages the quantity of sugar and dried fruit should be increased; and (6) that on long voyages the use of a water filter (Chamberland-Pasteur) should be enjoined. In addition the committee gave careful directions as to the quality, purchase, preservation, and final packing of the provisions (the food being inspected when purchased and afterwards once a fortnight), and directions as to how to act should beri-beri, scurvy, or similar food diseases appear at sea (the nearest port to be sought.) Finally, lime juice was enjoined on voyages south of 33° N. if the potatoes should run short.

THE LANCET.

LONDON: SATURDAY, JULY 26, 1902.

The Annual Meeting of the American Medical Association.

WE received through the courtesy of more than one of our brother editors in the United States advance proofs of many of the addresses delivered in connexion with the fifty-third annual session of the American Medical Association, but until this comparatively late date we have been unable to find an opportunity of giving them the attention that they merit. The presidential address was delivered on June 10th by Dr. JOHN ALLEN WYETH of New York. It dealt with many subjects, for the orator passed in review most of the matters which have concerned the medical profession in the United States during the past year. In many of these subjects the medical profession in this country is equally interested. The Medical Department of the United States Army suffers like our own Royal Army Medical Corps in being insufficiently manned. The prospects of promotion, too, are far from good. Dr. WYETH rightly urges the importance of the American Medical Association, as the representative organisation of the medical profession in the United States, coöperating with the medical corps of the army in the effort to procure legislation which will not only uphold the rights and dignity of the medical officers in the public service, but will give better protection to the health and lives of the troops. Within the last few years the medical profession in the United States has had to contend with a wide dissemination of the contagion of small-pox. The neglect of vaccination in that country, where no law for compulsory vaccination has yet existed, has led to results not very different from those obtaining in the British Isles where laws once compulsory have been so whittled down as to have lost practically nearly all their compulsory powers. Dr. WYETH considers compulsory vaccination in the United States to be impolitic and impracticable, but hopes for an extension of vaccination from the labour of physicians in impressing on the community the necessity and safety of this immunising process. The American Medical Association aims to raise the general level of medical education in the United States and also to improve the general status of the profession. It claims to represent 120,000 practitioners of medicine and its efforts should prove fruitful of good not merely to the medical profession itself but also to the people in general. Much has been done within recent years, but still much remains to be done, and the association will deserve well of the profession in all parts of the world if it succeeds in realising its high educational and ethical ideals.

The address in Medicine was delivered by Dr. FRANK BILLINGS of Chicago, and the subject was the Relation of Medical Science to Commerce. He pointed out that medicine is of greater importance to the world than ever before in protecting individuals, communities, and nations from infectious diseases which are more dangerous than formerly because of a denser population, increased facilities of communication, and international interchange of food and other products. Medicine has to safeguard man against infection from parasitic diseases of the animals used for food and against contaminated and adulterated food. Dr. BILLINGS asks, "Is modern medicine prepared to meet the demands of modern progress?" and he answers the question by showing what medicine has done in the past century and what it is prepared to do if called upon. He showed the vast results which have followed the study of bacteriology which was only made possible by the development of the microscope. The cultural methods of KOCH have made bacteriology an exact science, and they first rendered possible the separation and differentiation of bacteria. The mode of transmission of infection is especially important. Dr. BILLINGS pointed out that the rôle played by insects in the transference of micro-organisms has been studied and proved, and that the etiology of malaria and yellow fever has been made clear. By the microscope we can recognise malaria and differentiate it from other febrile diseases; nay, more, we can recognise the type of malarial infection and foretell its course. The first example of protection afforded by the inoculation of an attenuated virus was provided by vaccination against small-pox, and this method is now firmly established for some other diseases also. The introduction of serum-therapy has been a further step in the treatment and prevention of disease and the method has been specially useful in diphtheria. The prevention of infection in the lower animals is of the greatest importance to man, and with our present knowledge of the bacteriology of disease it would be possible to stamp out any microbic disease of the lower animals. The destruction of the infected bodies of animals is often necessary and this may imply loss to the individual or the community, but this temporary loss would prove to be a permanent gain to the whole people. Dr. BILLINGS showed how the application of the knowledge of the transmission of yellow fever by means of the mosquito, demonstrated by REED and CARROLL in Cuba, has had immediate practical results. In Havana during 1901 attempts were made by the sanitary authorities to test the mosquito theory of transmission. The city was made clean; the breeding places of the mosquito in and around the city were destroyed as far as possible, and persons suffering from yellow fever were isolated and protected from the mosquito. As a result yellow fever disappeared from Havana, and for the first time for years no case had occurred up to May 1st of this year. This freedom from yellow fever removed the necessity for quarantine regulations against ships from Havana and thus a distinct pecuniary saving was effected by medical science. The mosquito is of equal importance in the transmission of malaria, and experiments have shown that non-immune persons may live safely in the most malarious districts if simple precautions are taken against the bites of this insect. The value of medical knowledge to the commercial interests of the world is not adequately recognised. Dr. BILLINGS's address concluded with an appeal on behalf

of medicine for the moral and financial support of public bodies in the employment of the measures which science had proved to be efficacious in modifying, restricting, and abolishing infectious disease. Original research should be endowed and funds should be provided for the support of investigators in regions now dangerous to the white man. "It is right, therefore, that medical science should demand of the monied interests of the world the recognition which, though long withheld, is her just due. This she asks, not that individuals may profit in either fame or fortune, but that she may the more readily rid the world of infectious diseases for the sake of humanity."

The opening address in the Surgery Section was delivered by Dr. HARRY M. SHERMAN of San Francisco who took for his subject the Suture of Heart Wounds. A most interesting table from this paper is published in this issue on p. 233. It is not long since the idea of interfering surgically with the heart would have been looked upon as utterly absurd, yet when at last an attempt was made to close a wound of the heart it was found that the heart, like many other organs, more readily endured interference than was imagined to be possible. Some years ago ERICHSEN said that in his opinion surgery had nearly reached its final limits and that "there must be portions of the human frame that will ever remain sacred" from the intrusion of the surgeon. It is always difficult to foresee the direction in which advance will be made, though those advances appear most simple and obvious after they have occurred. Since ERICHSEN wrote, surgery has made many and great advances and it is difficult to be sure that no further extension of the field of its activity can occur. Until 1896, however, the heart had remained untouched, but in that year an Italian surgeon (FARINA) succeeded in placing three sutures in the wall of a right ventricle which had been perforated by a stab. The patient died, but not until the sixth day, and the cause of death was broncho-pneumonia. So that so far as the heart suture itself is concerned this case may be looked upon as a success. The example thus set was soon followed. Two other cases were recorded in the same year, two in 1897, four in 1898, eleven in 1899, three in 1900, and nine cases in 1901, whilst this year two cases have already been reported. So that up to the present 34 instances of the suture of heart wounds have been placed on record. These provide sufficient material to enable a very definite idea to be formed of the conditions which govern success. Of the 34 patients 13 ultimately recovered—a result which may be looked upon as very satisfactory when we consider the importance of the organ involved. In all but two cases the injury was caused by a stab; in the two exceptions it was due to a bullet. The ventricles are much more likely to be injured than are the auricles, for in only two cases was an auricle implicated; and this is fortunate, for it is far easier to insert sutures in the thick walls of the ventricles than in the far thinner walls of the auricles. Some of the earlier operators held that it was advisable to insert and to tie the sutures during the diastole of the heart. At first sight this might seem advisable, but, as Dr. SHERMAN pointed out, a little consideration will show that it is practically impossible; for the heart is beating rapidly, probably at least 100 times a minute; the interval between two beats is so extremely short that even the most skilful surgeon could not insert a stitch in the time. It is as well not to penetrate the endocardium, but this fortunately is not at all easy in the case of the ventricles. The material of the suture appears to be unimportant; silk has been chiefly used, but in several cases catgut has been employed with success. Interrupted and continuous sutures have been tried and the only difference appears to be that the continuous suture can be applied a little more rapidly.

The heart resents interference much less than might have been expected, though if the edge of the heart wound be held with forceps the heart may contract more violently on account of the local stimulation. The chief point of difference between the suture of the heart and of ordinary skeletal muscle is that the latter can be kept at rest during healing while the heart must still continue to contract more than 70 times a minute. Suture of wounds of the heart must be judged by results and the 13 successful cases that we have already mentioned prove conclusively that the operation is good, and it may now be definitely laid down that when the heart is wounded an attempt should be made to close the wound. Of course it frequently must happen that the loss of blood is so great and rapid that death occurs before a suture can be applied. In fact, of the 34 cases recorded five patients died on the operating table and 10 very soon afterwards from the effects of hæmorrhage and shock; so that for a correct appreciation of the value of the operation we may not unreasonably exclude these, thereby raising greatly the percentage of recoveries. Up to the present the application of sutures to a wounded heart is the only operation that has been undertaken, but it would be unwise to declare that surgery will attempt nothing more in connexion with the heart. A note by Sir LAUDER BRUNTON published in our columns on Feb. 8th, 1902, suggested the possibility that the grave effects of stenosis of the mitral valve might be relieved by surgical division of the diseased valve, but as yet there is not much evidence before the medical profession that good would follow such a heroic proceeding. We felt it our duty to disapprove of the suggestion, but we willingly admit that at present surgeons cannot see what is really practicable and what is not. Time must be allowed to play its usual part.

Small-pox in Belvidere Hospital.

DR. R. S. THOMSON and Dr. R. FULLARTON have reprinted a paper contributed by them to the Transactions of the Royal Philosophical Society of Glasgow, giving an account of small-pox in Belvidere Hospital, Glasgow, from April 10th, 1900, to June 30th, 1901. From beginning to end the paper is brimful of most interesting material, illustrated by well informed and thoughtful comment. Though addressed to a lay audience, every part of it is medically valuable and not the least so the preliminary explanation of the exact sense in which well-known terms—"discrete," "confluent," "foveated," "doubtfully vaccinated," and so forth—are used at Belvidere. It is, indeed, most desirable that throughout the country, and especially in hospital work, there should be uniformity in the application of such words and phrases, so that outbreaks of small-pox in their relation to vaccination might be more exactly compared with each other than is possible at present. These are matters with regard to

which hospital physicians might easily come to a common understanding.

The cases of small-pox treated during the period reported on were 1810 in number. Of these patients no less than 1643 had been vaccinated, while 45 were doubtful, and 122 were unvaccinated. Dividing the "doubtfuls" equally among the vaccinated and unvaccinated the latter amount to about 8 per cent. of the total cases. In Glasgow primary vaccination is so general that only 3 or 4 per cent. of the population are omitted, and the "crude" result appears to be that the 3 or 4 per cent. contributed about 8 per cent. of the small-pox. So far as it goes, that is as might be expected, and there is an easy explanation of the unvaccinated not having contributed a much larger percentage of the total admissions than these figures indicate. It is to be found in the ages of the vaccinated patients. Of 1643 only 3 were below the age of five years, only 31 between five and ten years, and only 93 between ten and fifteen years. It is in the adult ages that we find the great numbers of vaccinated cases admitted to Belvidere Hospital. Of the total 1643 patients no less than 627 were between 25 and 35 years old. None of these had been revaccinated and their protection against attack by small-pox had largely disappeared, though it still remained very effective against death by small-pox. But there is a further and a most unsatisfactory explanation of the percentage of vaccinated admissions. In the 1643 cases 886 had only one mark of vaccination and 589 had two marks, while only 94 had three and 74 had four marks. Abundant recorded experience of small-pox and vaccination makes it safe to assume that the well vaccinated yield much fewer small-pox cases in proportion to their numbers than the imperfectly vaccinated, and the above figures show that there is far too much one- and two-mark vaccination in Glasgow. So long as this is the case, and the inefficient primary protection is not supplemented by revaccination, small-pox outbreaks will find many victims among the vaccinated.

The fatality of the disease in Belvidere Hospital shows the usual discrimination between vaccinated and unvaccinated, the respective rates being 9·13 per cent. and 51·64 per cent. It is suggested in the paper that the fatality rates of pre-vaccination times included inoculated small-pox. That is very doubtful, but it is quite true, as also urged in the paper, that trustworthy statistics of fatality rates on a large scale for early times are very scanty. It might have been added that the best known of these old rates cover only a limited period of time and do not distinguish ages. Obviously also the fatality of some infectious diseases varies greatly as between one time and another and one place and another, while in small-pox, whatever be the gross fatality, that of the vaccinated is always much less than that of the unvaccinated, age for age. In Belvidere Hospital, among 258 vaccinated patients under 20 years old there were two deaths, and among 86 unvaccinated patients under 20 years old there were 44 deaths. These latter, however, may have included some babies under six months. One fact which should appeal to a Scotch town council's sense of economy is given in the paper. Of cases which recovered the average residence of the vaccinated was 29 days in hospital and of the unvaccinated 56 days, the relative cost per case being £6 10*s.* 6*d.* and £12 12*s.*

The Belvidere Hospital staff, being revaccinated, experienced that immunity from small-pox which though so familiar is none the less remaarkble. As usual, also, there were certain unintentional or unavoidable control experiments. Of six revaccinated vanmen regularly bringing supplies to the hospital none took small-pox, "but on one occasion a substitute who had not been revaccinated was sent in place of one of these. This man paid only one visit to the hospital and was admitted a fortnight later with small-pox." Of 230 workmen employed to erect temporary pavilions 217 were successfully revaccinated and all escaped small-pox, while 13 refused or escaped revaccination, and of these five contracted small-pox and one died. It is sometimes alleged by opponents of vaccination that the immunity of small-pox nurses is due to their being accustomed to such work. That is amply disproved by the way in which they succumb to other infectious diseases. Here however no such sophistry, worthless as it is, can be brought forward. Let it be observed that the 230 were not nurses habituated to hospital work, but were introduced from the outside for a purely temporary purpose. The revaccinated nurses, it need hardly be added, also remained free from small-pox. In conclusion, there is one point which we would suggest to the authors of the paper for further research, or at least for further report. It seems from page 20 that, in revaccinating, what amounts to Bryce's test, so well known in JENNER'S time, was regularly practised. A record of the results would be interesting and valuable.

Juries and Actions for Malpraxis.

WE find published in the *Canada Lancet* for June a full report of an interesting and instructive judgment delivered, in an action for alleged malpraxis, by the Hon. W. G. FALCONBRIDGE, Chief Justice of the King's Bench, Ontario. It is instructive because it deals exhaustively with the facts before the learned judge and with the law applicable to them, and not the least interesting point in connexion with it is a declaration of the practice prevailing in the Canadian courts with regard to this class of action. The action was brought by the wife of a farmer against two medical men practising in partnership, on the ground that they had negligently, improperly, and unskilfully treated her for injuries to her foot and ankle, the result of a fall, so that her foot was distorted and twisted and she was rendered permanently lame, with consequent additional injury to her general health. With regard to the legal practice in such cases the learned judge observed as follows: "Actions of this kind were, as a matter of course, formerly tried, both here—i.e., in Canada—and in England, by a jury; and it was the almost inevitable result that juries, perhaps innocently and unconsciously, looked more favourably upon the case presented by the patient than on that presented by the physician or surgeon. To remedy this condition of affairs, and not to leave doctors entirely at the mercy of juries, the courts of this country early became astute to lay down limitations and restrictions on the actions of the Twelve, or rather as to what matters ought to be left to them to deal with. For example, in 1869 the Court of Queen's Bench held in

JACKSON *v.* HYDE, 28 U. C. R. 294, that in an action against a surgeon for negligent malpractice, where the evidence is as consistent with the absence as with the existence of negligence, the case should not be left to the jury." It is upon this aspect of the case and not upon the purely surgical questions of diagnosis in reference to injuries about the ankle-joint that we propose to comment.

There must be evidence from which negligence may reasonably be inferred before a case is left to a jury to deal with in England as well as in Canada, but the observations of Chief Justice FALCONBRIDGE point to a withdrawal of cases from Canadian juries which in England would be left to them, such withdrawals being apparently to some extent due to the influence rather than to the authority of the judge. The opinions of Canadian judges with regard to juries appear to be expressed with considerable candour. When an English judge rebukes a jury for a perverse and obviously unjust verdict in a case which he may nevertheless have been compelled to leave to their decision, he is usually made the subject of unfavourable comment by newspapers ignorant of the circumstances, although newspapers curiously enough are frequently themselves victims of verdicts which in their own cases they would protest against if it were possible safely to do so. One of the judges in JACKSON *v.* HYDE, the Canadian case referred to, said, however,—and we believe that he put the matter truthfully and temperately: "It is notorious that there are many cases in which jurors are not the most dispassionate or most competent persons to try the rights of parties, and an action of this kind (against a surgeon for malpraxis) comes within the class to which I have alluded." In England, however, the plaintiff in such actions as we are referring to may always ask for a jury and we are not aware that his request is ever refused, nor do we blame him for demanding the tribunal which is most likely to find in his favour. In Canada it appears to be left to the discretion of the judge to put pressure on the parties to try the case before him alone, for in the case on which we are commenting Chief Justice FALCONBRIDGE states that he tried the issues without a jury, both parties having consented to his doing so. The matter was left in thoroughly good hands.

In this case it was proved that one of the partners sued had, with another surgeon, attended the plaintiff who had recently injured her ankle. The evidence of these two gentlemen was to the effect that they had set a fracture, the precise nature of which the report does not clearly show, and had reduced a dislocation of the astragalus, while their treatment, particularly with regard to the method of bandaging and keeping the ankle in position, was approved by three surgeons who gave evidence on their behalf. A surgeon appointed by order of the court, a practice not used in England, reported to the effect that at the time when he made his examination the astragalus was not in its normal position, that there was no sign of there ever having been any fracture of the tibia or fibula, and that though the pain in using the foot might diminish the deformity caused by the dislocation would be permanent. On the side of the plaintiff evidence was given by two medical witnesses that, if it were granted that the injury was correctly diagnosed, the treatment was improper. There was direct affirmative evidence called by the defendants, including that of two women friends of the plaintiff, that the plaintiff herself had at an early stage tampered with the bandages and that these were loosened by her to such an extent that the dislocation, undoubtedly still existing, might by these means have taken place. In these circumstances, there was a case such as in England would have been left to a jury to decide, and the Canadian judge is to be congratulated on having dispensed at the outset with the aid of twelve men of varied intelligence and experience and on having relied upon himself, seeking, apparently, a responsibility which many English judges accustomed to juries would do their best to avoid. The judgment delivered by Chief Justice FALCONBRIDGE, thoughtfully prepared and carefully reasoned, concluded by entirely acquitting the defendants of blame, and contained passages relating to matters of evidence the full weight of which many jurors would have failed to appreciate. In fact, the case was one in which a verdict might easily have been given for the plaintiff, in defiance of justice, by many well-meaning juries.

It was, for example, urged on behalf of the plaintiff that there had been a wrong diagnosis and that no fracture had ever existed, this being supported by evidence that the x rays revealed none. We have pointed out that when a sufficient time has elapsed for the callus to have become absorbed no change of outline need remain capable of being revealed easily by a skiagram, where a fracture has taken place and been accurately reduced. In the case in point the injury took place nearly three years before the trial and two years before the x rays were applied. That a surgeon should imagine a fracture and ignore a dislocation would seem natural to a jury impressed by the dislocated ankle admittedly before the Court and the fact that it would render the plaintiff lame for life. The reasons making such an error highly improbable, together with the full import of the patient's own interference and the comparative weight of the evidence of surgeons of varying degrees of professional eminence and opportunities for forming their opinions are, on the other hand, matters far more likely to be properly considered and dealt with by a judge. The judge also can reserve his decision and deliver it without haste, after the eloquence of counsel has been to some extent forgotten, basing it upon a minute and thoughtful study of the evidence. It must be remembered that however fully the judge may grasp the points of a case and however clearly he may indicate the right course to a jury he may still be unable to overcome prejudices and to guide a verdict. A jury may even seek to show its British independence by going against the recommendation of the judge who in his desire to secure justice for a suitor has to exercise the nicest tact and the most ingenious methods of persuasion in order to avoid, if possible, rousing suspicion and opposition and so defeating his own object.

An action tried before Mr. Justice CHANNELL and a special jury at the recent assizes at Nottingham suggests many points of interest to medical men which we cannot discuss in detail without a fuller report of the evidence than we have at present seen. It appears, however, to have been decided upon evidence in many respects closely resembling that given in the Canadian case which we have just discussed.

The action was based upon the alleged negligent and unskilful treatment of the plaintiff by the defendant, a medical man. The injury was a dislocation of the elbow which the defendant, a surgeon, said that he had reduced, not immediately on account of the swelling, but after an interval of some days. He further stated that he had discovered that the elbow was again dislocated several weeks later, when he sent the plaintiff to the Nottingham General Hospital whence he found his way to Charing Cross Hospital. There was medical evidence that the defendant should, in the opinion of the witness, have been able to diagnose and to reduce the dislocation at once. There was also evidence that while under the care of the defendant the plaintiff visited two local "bone-setters" who presumably handled the elbow, for they stated that at that time the joint was dislocated. For the fair trial of a case such as this, involving as it does the weighing of scientific evidence and the consideration of matters likely to arouse prejudice, a jury, even a special jury, is not necessarily the best possible tribunal. We are not in a position to criticise the verdict in this particular instance, but we may point out that the amount awarded, £25, is a curious sum. If the plaintiff, a collier, was either permanently or for some considerable time (the accident took place in November, 1900) disabled from following his employment, it seems hardly enough; on the other hand, if the disablement was not due to the malpraxis of the defendant the plaintiff was not entitled to any damages at all. We refer to the case because in many of its features it is exactly the sort of case where the decision of a sound and strong judge might have been more satisfactory than the verdict of a jury.

Annotations.

"Ne quid nimis."

THE HEALTH OF THE KING.

WE are glad to announce that the health of the King continues to progress favourably in every direction. Sir Frederick Treves and Sir Francis Laking, who with Surgeon Bankart, R.N., are on board H.M.Y. *Victoria and Albert*, are, as will have been seen from the bulletins, able to report that their illustrious patient is doing well in all respects. We may add that the wound is granulating nicely and every precaution is taken to ensure rest to the parts. The King still keeps strictly to the recumbent position and has not yet left his couch. He is moved from his bed to the couch daily and is wheeled on deck when the weather permits. The report that we are now able to give should entirely reassure those who have been a little apprehensive as to the comforts and value of sojourn on board a yacht during the spell of nasty weather with which last week closed and under which this week opened. The complete rest of body and mind which the King is now enjoying will be of the greatest service to his physique.

EXPERIMENTAL PSYCHOLOGY AT KING'S COLLEGE, LONDON.

PSYCHOLOGY is now a subject which admits of practical laboratory work, but very few of our universities and colleges have instituted practical departments for the study of this important branch of science. The council of King's College, London, has shown itself abreast of the times by providing a new laboratory for experimental psychology, and Mr. W. G. Smith, M.A., Ph.D., has been appointed lecturer on the subject. The new laboratory will be in contiguity to the physiological laboratory and will be under Dr. W. D. Halliburton's general supervision. Dr. Smith is already well known for his work in connexion with the subject at Leipsic and Harvard and more recently for that which he has carried out in the laboratory of the Claybury Asylum in coöperation with Dr. Mott.

HENRY MEMBURY WAKLEY.

WE regret to announce the death of Mr. Henry Membury Wakley, which occurred on Friday, July 18th. Mr. Henry Wakley was the second son of Thomas Wakley, M.P., coroner for West Middlesex and Founder of THE LANCET, and was born in Brompton in 1824, the year after the first issue of this journal. His second name was that of the village in Devonshire, Membury, from which his father came. For some two years he studied medicine at University College Hospital but the work was not congenial to him and subsequently he became a barrister and was for a time secretary to the New Equitable Life Assurance Company, a company which came into existence to fulfil his father's ideal of a life assurance office worked by medical men for medical men, where the general practitioner should take the place of the solicitor as agent and referee. Mr. Henry Wakley was also for a brief period deputy coroner for his father but was the only one of the three sons of the Founder of THE LANCET who was never associated with him in his editorial duties. Mr. Henry Wakley had lived in a very retired manner in Kensington for many years before his death, during the latter part of his life having been a great invalid. The body, according to the provisions of the will, was cremated at Woking on the 22nd inst., the ashes being subsequently placed in the Columbarium at Brookwood Cemetery.

MEDICAL FEES IN CRIMINAL CASES.

IN a leading article in THE LANCET of July 12th, 1902, p. 85, we dealt at some length with the question of fees to medical witnesses in criminal cases, now paid according to a scale fixed in 1858, and we illustrated our views by reference to a case which recently occurred at Bungay. In this case certain medical men refused to examine a little girl, said to have been indecently assaulted, on the ground that the fees which would be paid to them for the expert evidence at assizes or quarter sessions which they were being thus invited to give would be wholly inadequate to compensate them for the loss of time and trouble entailed. There was, we need hardly say, no question of rendering medical aid to an injured person but simply a question of evidence as to whether the child's genital organs had been tampered with. We observed that Mr. Justice Kennedy when the attitude of the medical men in this matter was brought to his notice expressed a full appreciation of their position, and it will be seen also from a report which we publish at p. 237 that the magistrates of the district, under the chairmanship of Mr. Rider Haggard, fully understood the point raised and made a practical suggestion to remedy the difficulty that has arisen. A temperate and well-reasoned article in the *East Anglian Daily Times* shows that the medical men in question enjoy the sympathy of their neighbours while it endorses the views of the magistrates—namely, that the proper course is to appoint a medical man to act for the police in all such matters. It is obvious that a man who undertakes the duties of a police surgeon, knowing that he will have to make such examinations as those referred to, with the liability to give evidence as a consequence,

places himself by his own act in the position that he occupies, whereas the ordinary medical witness in a criminal case is the victim of circumstances. It will be seen, however, from the report of the proceedings before the Bungay magistrates that the question raised as to expert evidence has been referred to the Home Secretary by the East Suffolk police, and we would call our readers' attention to the answers returned. Mr. Ritchie differs from Mr. Justice Kennedy, and we may fairly say from the report quoted that the views of Mr. Ritchie do not coincide with those held by the magistrates. Mr. Ritchie thinks that "such refusals must be considered as very discreditable to the medical men concerned, but he is glad to believe that such incidents are very rare." We would like Mr. Ritchie to explain why it should be discreditable to a medical man to decline to make an examination of a healthy girl's vagina because she has brought an accusation against someone of which he knows nothing, when he is aware, perhaps from bitter experience, that his examination may entail his spending a wholly uncertain period at an assize town in return for a fee of a guinea a day with half a crown a night towards his hotel bill, should he incur one. For this guinea a day he will have to leave his patients, making what arrangements he can for their welfare, and he will have to make those arrangements in complete uncertainty as to the length of his enforced absence. "Doctors," continues the Home Secretary, "are, as a rule, perfectly willing to undertake an examination of this sort, though aware that they will only be paid their expenses as witnesses." This is the expert evidence of Mr. Ritchie on a point with regard to which we should like to know what his experience may have been. The perfect willingness of medical men in such circumstances is a condition new to our observation, while "their expenses as witnesses" suggests that Mr. Ritchie would expect them to give evidence in return for their railway fares and the 2*s.* 6*d.* a night already allowed for their hotel bills. But Mr. Ritchie also has a remedy to propose. "In an exceptional case, where owing to the refusal of a medical man to make such an examination there might be danger of a serious miscarriage of justice, you should communicate with the Director of Public Prosecutions who could, if necessary, employ an expert to make the examination." How the exceptional nature of the case and the danger of a miscarriage of justice, "serious" or otherwise, would be recognised Mr. Ritchie does not suggest, but apparently he would rather charge the Imperial Exchequer with a sum that obviously would be considerable for the fees and expenses of the "expert" supplied by the Public Prosecutor than revise a scale of payments arranged nearly half a century ago and permit medical witnesses to be remunerated from the county fund with some regard to their loss and the anxiety inflicted upon them. The use of the expression "very discreditable" by the Home Secretary is amazing, for it is wholly inapplicable to circumstances which no fair-minded man can hold to be discreditable at all, and we regret that there is not in the Home Secretary's letter evidence of that careful consideration of material facts that should precede official pronouncements, particularly those purporting to convey serious censure of individuals or of a class.

THE METROPOLITAN WATER-SUPPLY.

THE report of the condition of the Metropolitan water-supply during the month of May has been published recently. The Water Examiner states that the Thames water was in good condition at Hampton, Molesey, and Sunbury during the whole of the month and that the average daily supply delivered from the river was 124,094,946 gallons, which is nearly 60 per cent. of the total amount distributed by the London water companies. From the Lee the average quantity abstracted daily was 36,338,271 gallons, and from springs and wells 47,916,315 gallons. The total daily quantity was 208,378,583 gallons (including 29,051 gallons daily from the Hampstead and Highgate ponds) for a population estimated at 6,362,684, and this represents a daily consumption per head of 32·75 gallons. In the case of every company the number of gallons supplied per head was less during the month than it was during the corresponding month of the previous year. The Chelsea, East London, Grand Junction, and West Middlesex companies now profess to give constant service to all their customers. In the case of the other companies—the Kent, New River, Southwark, and Vauxhall and Lambeth—constant supplies are respectively given to 98·4, 95, 93·1, and 76·7 per cent. of the customers. The water supplied by the New River Company was of very good quality. The East London Company distributed water which, on the average, was of rather better quality than that supplied by four of the Thames companies. A considerable proportion of the water of the East London Company is now obtained from wells. The daily average supply, which amounted to 38,790,000 gallons, was made up as follows: from the Lee and storage, 14,595,269 gallons; from the Thames, 8,174,000 gallons; from wells, 10,251,731 gallons; from Hanworth Springs, 1,659,000 gallons; from the Thames, "per Southwark and Vauxhall Company," 4,110,000 gallons. The water of "Hanworth Springs" is in reality well water, so that the total proportion of well water obtained by the East London Company amounts to little less than one-third of the total supply. Samples of the water of all the companies were taken on May 21st and a complete analysis was made of them by Dr. T. E. Thorpe, F.R.S., the chemist to the Local Government Board. He found that the relative amount of organic impurity in these samples was represented numerically as follows. Kent and New River, 12; Chelsea, 24: Lambeth, 27; Southwark and Vauxhall and East London, 28; Grand Junction, 29; West Middlesex, 31. The proportion of brown tint seen in samples in a two-foot tube ranged from 3 degrees to 19 degrees of the standard in use. The water of the Lambeth Company exhibited the deepest average shade of brown. The most important results of Dr. Thorpe's examination are given in the appended table which shows the results of the analysis expressed in parts per 100,000.

Company.	Organic carbon.	Organic nitrogen.	Nitrogen as nitrates and nitrites.	Total combined nitrogen.
Chelsea	0·126	0·017	0·154	0·171
West Middlesex ...	0·168	0·016	0·125	0·141
Southwark	0·151	0·016	0·161	0·177
Grand Junction ...	0·157	0·016	0·170	0·186
Lambeth	0·147	0·015	0·187	0·202
New River	0·062	0·008	0·187	0·195
East London	0·148	0·015	0·354	0·369
Kent	0·061	0·008	0·668	0·676

BARON LARREY.

THERE are few names more honoured, not only in France, but throughout the civilised world, than that of Jean Dominique Larrey—the virtuous Larrey, as the great Napoleon called him. In his native country three statues have been erected in his honour and now a fourth monument has appeared in the form of an octavo volume of 756 pages[1] by Dr. Paul Triaire. Having had access to many unpublished official and private documents, including some

[1] Tours, Alfred Mame et Fils, 1902.

collected with filial care by Baron Hippolyte Larrey, the author was afforded an opportunity of producing an exhaustive work and has conscientiously and efficiently performed his task. The book which he has produced is one to be read from cover to cover. Larrey's long and strenuous career receives full justice, while incidentally matter of great interest concerning the notable characters and the historical scenes with which he was associated is constantly introduced. "Drawn in the footsteps of the conqueror throughout his vertiginous course," says Dr. Triaire in his exordium, "Larrey filled an important place in the Napoleonic epic. He was present on every battle-field, and established his ambulances in all the capitals of Europe. In this long and glorious series of campaigns, in this marvellous and dramatic triumphal march when the armies of France advanced from the Nile to the Danube, from Austerlitz to Madrid, from Wagram to Moscow, and from Leipzig to Waterloo, the figure of this army surgeon emerges, stands forth in surprising relief by the side of those of warriors whom a hundred victories have consecrated. A character is revealed wherein science, authority, valour, and humanity are combined in a degree never seen before, and probably never to be seen again. In spite of a defective organisation, Larrey contrived single handed to raise the medical service to a level with the rest of Napoleon's army. By the side of the machine made perfect for conquest and for death he placed another equally perfect but designed to succour and to preserve. From the inferior and discredited rank wherein, notwithstanding their talents, their good service, and their personal sacrifices, the members of the healing art were subordinated in old-time armies he raised himself to the level of the most illustrious captains and of the most celebrated physicians. From the one class he borrowed talent and intrepidity and from the other science and devotion, thus in his own person uniting the virtues of both." Baron Larrey studied medicine at Toulouse and on graduating entered the French navy. In 1793 he was transferred to the army, and in 1797 he joined Napoleon in Italy. In 1805 he was placed at the head of the medico-surgical department and soon afterwards was created a baron of the empire.

A SLANDER CASE.

IN a leading article in our present issue we venture to suggest that a jury, the vaunted Palladium of British liberty, is not always the most just and satisfactory tribunal for the decision of issues where scientific questions and the interests of medical men are involved. An action tried last June at the assizes at Bury St. Edmunds aptly illustrates our point. The plaintiff Mr. A. H. Gibbon, medical officer of health of the borough, practising in partnership with Dr. R. E. Nix, the public vaccinator in the same locality, sued a member of the town council for words uttered with reference to himself and his action in recommending certain precautionary measures during the recent outbreak of small-pox. The words complained of were, "It is all d——d rot. It is only a got up job on the part of Gibbon and Nix to put money into their pockets for vaccination fees." It was denied that the defendant had used these words and the evidence on the subject was conflicting, but Mr. Justice Kennedy told the jury in plain terms that if they found that the defendant did in fact use them there could be no doubt that they were grossly slanderous. To this proposition we should have thought all reasonable men would assent and the point involved in it is one tolerably simple and easy to be grasped. If the words were used, as there was no shadow of an attempt to justify their use, it was right that the speaker should be made liable to pay reasonable but not vindictive damages. The jury, however, found that the slander had been uttered, that damages were due to the medical man slandered, and assessed them at one farthing, for which sum judgment was given with costs. Such a verdict may well cause fair-minded men to endorse the opinion of Chief Justice Falconbridge[1] upon the defects of the jury system exhibited in actions where prejudice is involved and in particular where medical men are concerned.

ARMY ESTIMATES: VOTE FOR MEDICAL ESTABLISHMENT.

A LARGE portion of the debate in the House of Commons last week on the Army Estimates was taken up with the case of Sir Redvers Buller and relatively little time, considering the importance of the subject, was given to that on the vote of £1,025,000 for the medical establishment. We are always glad to see attention called to the army medical service, but it is unfortunate that discussions in the House regarding that service are so frequently unsatisfactory reading to those actually acquainted with the facts and regulations. It is confessedly a subject about which but few people have sufficient knowledge to enable them to speak competently and with effect. It is, no doubt, a far more difficult and tiresome process to acquire an up-to-date knowledge of official ways and regulations than to sum up the whole matter as the antiquated red-tape notions of permanent officials; but general statements and criticism of this sort are very ineffective and do not tend to carry us much "forrader." With regard to the supplies of hospitals and stores for the sick and wounded we are all in favour of simplifying methods of administration and procedure in war and of reducing to the utmost practicable extent the clerical work of medical officers, and we look to Mr. Brodrick to see that this is done. There are in this and several other directions many desirable changes and improvements which we make no doubt could be carried out if they were properly set about on commonsense lines. Concerning these the views of medical officers—who are, after all, most concerned—should be obtained. Mr. Brodrick should avoid a repetition of the great mistake that occurred in the constitution of the committee for the reorganisation of the medical services—namely, the omission to have upon it an experienced medical officer of high rank. It must always be borne in mind that an army medical officer is called upon by the constitution and terms of his service to discharge a number of duties other than those of a purely professional kind and such as do not fall to the lot of a practitioner in civil life. It is only right to add, however, that, speaking generally, we quite concur in what Dr. Farquharson said in the debate in question. Mr. Brodrick and his advisers, if they have not altogether gone on the lines that we suggested or carried out all that we have desired, have nevertheless made many radical and needful changes and introduced many very important and valuable improvements in the army medical service. Mr. Brodrick pointed to the fact that there were between 70 and 80 candidates for the 32 vacancies in the Royal Army Medical Corps. We are very glad to hear it and hope that the new measures which, taken as a whole, are very good and in the right direction will continue to attract a high class of candidates from the medical schools.

THE SUTURING OF HEART WOUNDS.

DR. HARRY M. SHERMAN of San Francisco recently delivered an address before the American Medical Association on the Closing of Wounds of the Heart by means of Sutures. We have referred to this address elsewhere (p. 226) and have analysed the main points of the operation, but some surgeons may desire to have the particulars of

[1] See p. 228.

CASES OF SUTURES OF WOUNDS OF THE HEART.*

No.	Operator and year.	Location of external wound.	Chamber wounded and size of wound.	Time of operation after injury.	Anæsthetic.	Results and remarks.
1	Farina, 1896.	Just above the margin of the left sixth rib, near the sternum.	Right ventricle, one quarter of an inch; three stitches.	—	—	Death on sixth day from broncho-pneumonia.
2	Cappelen, 1896.	Fourth left intercostal space in mid-axillary line.	Left ventricle, four-fifths of an inch.	One hour.	—	Death after several days; pericarditis; branch coronary artery cut.
3	Rehn, 1896.	Fourth left intercostal space near the sternum.	Right ventricle, three stitches.	The following evening.	—	Recovery; empyema.
4	Parozzani, 1897.	Seventh left intercostal space in the mid-axillary line.	Left ventricle, three-quarters of an inch.	Five hours.	Nil.	Recovery.
5	Parozzani.	Third left intercostal space.	Left ventricle, three fifths of an inch.	Half an hour.	,,	Death on second day from anæmia (?). Interventricular septum had been cut.
6	Fummi, 1898.	Under the left nipple.	Apex; cavity not opened; one stitch.	Several hours.	—	Recovery; empyema.
7	Ninni, 1898.	Fifth left intercostal space.	Left ventricle; three stitches.	Quickly.	None.	Death on the table.
8	Parlavecchio, 1898.	,, ,,	Left ventricle, one and a half inches; apex.	Eight hours.	Chloroform.	Recovery.
9	Giordano, 1898.	Second left intercostal space.	Left auricle, four-fifths of an inch; four stitches.	Half an hour.	None.	Death on nineteenth day from empyema; abscesses of the right lung.
10	Nicholai, 1899.	Fourth left intercostal space, midway between the margin of the sternum and the nipple.	Right ventricle.	One and a half hours.	Yes.	Death after 12 hours.
11	Tuzzi.	Fourth left intercostal space.	Two wounds, non-penetrating.	—	None.	Death on the twenty-second day from empyema; pericarditis.
12	Longo.	Fifth left intercostal space, two-fifths of an inch internal to the nipple.	Left ventricle; three stitches.	At once.	,,	Death in 15 minutes.
13	Ramoni.	At third left cartilage, four-fifths of an inch from the sternum.	Right ventricle; two wounds; one non-penetrating; four stitches.	—	,,	Recovery.
14	Marion, 1899.	Shot through the breast.	Right ventricle; catgut suture.	—	—	Death.
15	Rosa, 1899.	Fifth intercostal space.	Left ventricle, three-fifths of an inch; not certain it penetrated ventricle.	—	None.	Recovery.
16	Horodynski, 1899.	—	Right ventricle, one and a half centimetres long.	—	—	Death.
17	Maliszewski, 1899.	—	—	—	—	,,
18	Maliszewski, 1899.	—	—	—	—	,,
19	Bufnoir, 1899.	Sixth left intercostal space.	Right ventricle, gunshot, 22 calibre.	—	—	Death; necropsy showed perforation of ventricle and the anterior opening only had been sutured.
20	Pagenstecher, 1899.	Fourth left intercostal space beneath the nipple.	Left ventricle, near the apex; two stitches.	16 hours.	None.	Recovery.
21	Nanu, 1900.	Third intercostal space, four centimetres from the edge of the sternum.	Right ventricle, two centimetres long; two interrupted sutures.	—	—	Death on the fifth day from infection of the pericardium and pleura.
22	Maselli, 1900.	Below and internal to the left nipple, cutting the sixth rib.	Left ventricle, near the apex; two stitches.	One and a half hours.	—	Death in 12 hours.
23	Fontan, 1900.	Six wounds with scissors between the third and the seventh ribs in the cardiac region.	Left ventricle, 12 millimetres long; continuous catgut sutures; three stitches.	Six hours.	Chloroform.	Recovery.
24	Nietert, 1901.	—	Right ventricle penetrated; three silk sutures.	—	—	Death after 36 hours.
25	Vaughan, 1901.	Fifth left costal cartilage divided.	Left ventricle, two and a half centimetres long; continuous silk sutures seven stitches.	Three-quarters of an hour.	Ether.	Death on the table from hæmorrhage, about completion of operation.
26	Nietert, 1901.	Left of the sternum.	Left ventricle, not sure cavity was penetrated; two sutures.	—	—	Recovery
27	Ninni, 1901.	,, ,,	Right auricle.	—	—	Death in four days; sepsis.
28	Mignon et Sieur, 1901.	—	Right ventricle.	—	—	Death.
29	Fontan, 1901.	—	Left ventricle; catgut sutures.	—	—	Recovered; had empyema.
30	Brenner,† 1901.	Left of the sternum, near the sixth cartilage.	Right ventricle, seven centimetres.	The following day.	Yes.	Death on the table; degenerate heart muscle.
31	Watten,‡ 1901.	Fourth right intercostal space.	Right ventricle, 3·5 to 4 centimetres.	—	—	Recovery; right pleura wounded; pneumothorax.
32	Lastaria, 1901.	—	Left ventricle.	—	—	Died soon.
33	Launay,§ 1902.	—	Left ventricle, anterior and posterior walls; pistol shot; catgut suture in each.	—	—	Recovery; no complications.
34	Nietert,‖ 1902.	Left sixth interspace, to the right of the papillary line.	Left ventricle, far back, two centimetres; penetration uncertain; two interrupted silk sutures.	14½ hours.	—	Recovery; purulo-sanguinolent effusion and thoracotomy.

* Cases 1 to 28 inclusive from table of Dr. Geo. T. Vaughan, Philadelphia Medical News, Dec. 7th, 1901. † Wiener Klinische Wochenschrift, 1901, No. 11. ‡ Deutsche Medicinische Wochenschrift, 1901, No. 37. § La Presse Médicale, March 29th, 1902. ‖ Philadelphia Medical Journal, May 3rd, 1902.

all the cases which have been published up to the present; we therefore give the accompanying table.

CHEMICAL QUALIFICATION IN IRELAND.

AN important step has been decided upon by the council of the Institute of Chemistry by which chemists in Ireland may present themselves for examination in Dublin. Persons thus desirous of qualifying themselves to be public and technical analysts may attend the examinations at the laboratories of the Royal University of Ireland, Dublin. The next intermediate and final examinations in Ireland of the Institute will be held in July, 1903.

SHOULD THE GOUTY DRINK CIDER?

A BEVERAGE for the gouty relatively harmless and yet containing a small percentage of alcohol is one for which a large number of sufferers from gout would be very grateful, and the medical practitioner is frequently asked if cider is permissible in this respect. The best test of the suitability or otherwise of any beverage for those of arthritic tendencies, either inherited or acquired, is that of experience—i.e., as to whether it produces in such subjects an attack of articular gout or other gouty manifestations, and in many cases this test is a very delicate one, any indulgence being frequently followed by some disturbance recognisable both by the patient and the practitioner as the result. Judged by this standard it may be stated that, though as a general rule the gouty are better without alcoholic liquors, yet ordinary "rough" cider, fully fermented and free from sugar, is practically harmless, having little or no tendency to excite an attack of gout. The percentage of alcohol is small and the acidity is chiefly due to malic acid, which is in the body converted into alkaline carbonates and excreted as such, and cider has not therefore the injurious effects in gout of the sweet and highly alcoholic wines. On the other hand, partially fermented "sweet cider" or the artificially sweetened and aerated variety, "champagne cider," may excite gouty manifestations in those liable or predisposed to the disease, and should therefore be prohibited. Unfortunately the rough cider is to most people less palatable than the sweet variety and especially to the gouty who are in many cases fond of sweet foods and beverages.

THE ASSOCIATION FOR PROMOTING THE COMPULSORY REGISTRATION OF MIDWIVES.

THE annual meeting of the Association for Promoting Compulsory Registration of Midwives was held on July 22nd at 3, Grosvenor-place, London, S.W. Sir Michael Foster, M.P., in seconding the motion for the adoption of the report and balance-sheet took the opportunity of accentuating the triumph which those belonging to his school of thinking have obtained over the very large proportion of the medical profession who hold opposite views. Sir Michael Foster declared that it was a great privilege to congratulate the members of the association on their well-earned success when they had had to contend against a very considerable section of the medical profession. For that very reason we think that Sir Michael Foster might have been a little more thoughtful about the future; perhaps the considerable section will be justified in their opinion. It is true that he allowed that there were dangers in connexion with the midwives, and he considered that the members of that association would be doing good service by continuing their organisation and devoting their efforts towards securing that the women for whom they had been working so long should deserve the measure passed on their behalf—and here he was more or less anticipating. Dr. F. H. Champneys, the obstetric physician of St. Bartholomew's Hospital, said that the association had now to show that there was no ground of apprehension in regard to all the horrors predicted from what was called the new class of practitioners. He was thankful to think that there was a prospect of a body being formed which would overlook the midwives and in a few years' time he believed that the proper limits of a midwife's duty would be settled to general satisfaction. Perhaps; but it is probable that neither Sir Michael Foster nor Dr. Champneys knows much about the way in which the new Act is likely to operate in rural districts.

THE DISTRIBUTION OF PLAGUE.

THE weekly return of the Director-General of the Sanitary Department in Egypt shows that for the week ending July 13th there were 5 new cases admitted, 2 of which occurred in Europeans. The deaths numbered 6, the recoveries 2, and 9 cases remained under treatment. With respect to sanitary measures, 17,455 rooms were disinfected and 533 were lime-washed. 119 sacks of effects were disinfected and 7530 sacks of rubbish were burnt. The number of rats killed and burned was 1093.

THE ANTI-MEDICAL BIAS.

Le Temps, a journal hitherto noted for its temperance of utterance and sanity of outlook, has recently devoted considerable space to the discussion of a work said to have created a *furore* on the continent. The book in question is entitled "Mémoires d'un Médecin," by "Dr. Veressaïef"—not by Dumas *père*—which in 1900 ran serially in the pages of the *Mir Bogyi*, one of the leading St. Petersburg reviews. It has been translated into French and into German, and the acute critics of the one nation and the philosophers of the other are said to have acclaimed it. To the innate conservatism, or to the honour, of England shall we attribute the fact that an English translation is not yet forthcoming? The work of "Dr. Veressaïef," whose real name is Vincent Szmidowicz, is apparently an outcome of the latest development of that dislike of the medical profession which is world-old and world-wide. The writer, we are informed, is the son of an austere, old-fashioned practitioner, an adherent of the "vitalist" theories of the early nineteenth century, a devout religionist and severe disciplinarian—in fact, a Russian Puritan and faddist—and to this parent he is said to owe a certain grave moral attitude towards all medical questions. He has suffered, moreover, for his opinions. Hence, perhaps, much of the bias of his book, which passes in review a score or more grievances against the profession, well known, *mutatis mutandis*, to all students of the history of society and of medicine, but apparently startlingly novel to the quidnuncs who now dabble in science as once they did in æsthetics. The career of a Russian medical student is described and we are informed that a hospital course in Russia convinces the aspirant to a degree of several unpleasant truths—(1) that patients are unduly fatigued by staff and students alike; (2) that the modesty of women is unduly, nay, cruelly, wounded by the same persons; and (3) that the poor are made to pay very dearly for the care bestowed upon them in the wards. Dr. Szmidowicz has for seven years been attached to a large St. Petersburg hospital devoted to the working classes, but his words would be more convincing were it not possible to parallel them in what we may term medical folklore. It has long been a truism among our own poor who benefit by hospitals that they are experimented upon in those institutions, where they are the *corpora vilia* of teachers and learners alike. This complaint is generally baseless, but it should act as a gloss on the gravamen of the Russian writer. The notion that the modesty of women is wounded is as old

as the day when throughout Europe the male obstetrician was decried by a generation as little able as its successors to grasp the elementary notion that science views nudity in a purely impersonal light. The ancient doubt in the *bona fides* of medicine, justifiable enough in pre-scientific times, lingers unreasonably in the pages of this last exponent of what might be termed *Aerztenhasse*, "doctor-hatred," on the analogy of *Judenhasse*. He implies that medicine and surgery are utterly careless of life because many common operations—in Russia at least—have fatal results. Medical innovations, he avers, according to *Le Temps*, are often rather poisons than remedies, and medicine in its present stage knows and can achieve scarcely anything in the direction of positive science. The terrible indictment culminates in the enumeration of scores of experiments in serum-therapy undertaken upon human subjects by well-known men of science in a spirit we seem to be invited to regard as little short of ghoulish. The tirade would be appalling were it not so familiar. The writer, in fact, belongs to the same category as the anti-vivisectionists, the anti-vaccinationists, the people who "do not believe in doctors and physic." Only he is more brilliant and better informed in error.

THE ASSOCIATION OF BRITISH POSTAL MEDICAL OFFICERS.

THE annual dinner of the Association of British Postal Medical Officers was held at the Whitehall Rooms of the Hôtel Métropole, London, on Thursday, July 17th, Dr. J. Walton Browne, the President, being in the chair. The occasion was honoured by the presence of the Marquess of Londonderry, K.G., His Majesty's Postmaster-General, and a large number of guests distinguished in various walks in life; so much so that, perhaps, there was an absence of the usual distinctly medical tone. The meeting at any rate formed an example of the influence which the medical profession and its various branches can bring to bear on the world at large, while it served to emphasise the regret that must be felt that medical men do not unite to make their public value more freely felt than it is. (It might have been thought that things were improving somewhat in this direction, but we are afraid that we cannot hope for much real improvement when we find only some 120 medical men assembling to record their votes on such a serious occasion as a change of the constitution of the British Medical Association with its many thousand members.) However, on the present occasion there can be no doubt that the British postal medical officers attracted a brilliant company to their banquet which was of a most pleasant nature. The Postmaster-General said kind things about Mr. Henniker Heaton which Mr. Henniker Heaton courteously reciprocated. Sir John Leng, M.P., made friendly remarks about Sir George Murray, K.C.B., the secretary of the Post Office, and Sir George Murray, in an able speech, promised Sir John Leng that he would keep him to his word. In the course of the toast list a presentation consisting of five handsome bowls was made to the energetic and courteous honorary general secretary of the association, Dr. R. Ritchie Giddings. The presentation was made by the President and suitably acknowledged by Dr. Giddings. Other toasts were "The Houses of Parliament," proposed by Sir Robert Hunter (solicitor to the Post Office) and replied to by Mr. Edward Bond, M.P., and Mr. Joseph Walton, M.P.; "Our Colonies," proposed by Sir Hugh Gilzean Reid, LL.D., and replied to by Sir William Mulock, K.C.M.G. (Postmaster-General of Canada). Sir Walter Peace, K.C.M.G. (Agent-General for Natal Colony), and Mr. W. G. Hamilton (Postmaster-General of Transvaal Colony) were also announced to reply, but other engagements had unfortunately called them away before, owing to the great length of the proceedings, the toast was reached. "The Association of British Postal Medical Officers" was proposed by Sir James Crichton Browne and acknowledged by the President; and, finally, "The Guests," given by Dr. R. Paramore, was responded to by Sir Dyce Duckworth. The Imperial Quintette played a good selection of music during the dinner and some excellent songs admirably rendered by Miss Elsie Mackenzie, Miss Ethel Bevans, and Mr. Herbert Emlyn added much to the enjoyment of the evening's proceedings which did not finish until past midnight: this leads us to remark that the only fault we have to find with the executive authorities of the Association is that they are inclined to be even a little too kind to their guests.

THE SURGICAL USES OF THE HAIR-PIN.

IN cases of emergency, especially in country districts, an operation may be necessary and some of the requisite instruments may not be at hand. Articles of domestic use can sometimes be adapted and used as substitutes in a manner that the uninitiated would never imagine. The subject has not received the attention from surgical writers that its practical importance demands. Our transatlantic brethren with their great mechanical ingenuity give us some valuable hints. In *American Medicine* of April 5th Dr. J. Torrance Rugh has published a most useful article on the surgical uses of the hair-pin. The subject has previously been treated in a more limited manner by Dr. Eberson of Tarnow.[1] Ubiquity, ease of sterilisation, convenient size, and adaptability to any desired shape by bending render the hair-pin exceedingly useful. If it is japanned or enamelled the covering can easily be removed by heat. The hair-pin may be used in three ways—in its natural form, straightened, and bent or twisted. In its natural form it may be used:—1. To pin on dressings or bandages (for this purpose the points may be sharpened). 2. To remove concretions or foreign bodies from a sinus or natural canal. The rounded end of the hair-pin is passed over the object which is then withdrawn. Professor Horwitz of the Jefferson Medical College has suggested bending the rounded end on the flat to an angle of 10° or 15°, which facilitates the removal of a body from a canal such as the urethra. 3. As a blunt curette. Dr. Eberson has suggested this use. For the removal of soft granulation tissue or of any softened or broken-down material the hair-pin is as useful as any blunt curette. If the granulations are deep the hairpin may be used grasped in forceps. 4. As an æsthesiometer. The points of the hair-pin may be set close or wide and the sensitiveness of the part determined. 5. To catheterise a female. The rounded end is passed through the urethra, the points being firmly held to prevent the hair-pin from slipping into the bladder, or, better, the ends are first bent outwards which renders this accident impossible. 6. To pass under a blood-vessel and with a figure-of-eight ligature or by compression to arrest hæmorrhage. 7. As a pair of callipers. Straightened, the hair-pin may be used—1. As a probe. Dr. Rugh has easily explored Stensen's duct with it to determine the presence of a calculus. 2. To wire bones together in cases of resection and fracture. 3. After sterilisation to rupture the membranes during labour. 4. As a small cautery. 5. As hare-lip pins. 6. As a hook to abstract foreign bodies from canals and sinuses. 7. As a tenaculum. Bent or twisted into the required shape the hair-pin may be used (1) as a nasal speculum; (2) as a retractor for wounds or for the eyelids, nose, lips, and labia; (3) as an aneurysm needle; (4) in lieu of a tracheotomy tube—for this most important

[1] Zeitschrift für Krankenpflege, 1899, No. 1.

use two pins are bent into the form of retractors and kept in position by tapes or one pin may be so fashioned as to maintain the patency of the tracheal wound and similarly secured by tapes; and (5) as a drainage-tube. The ends of the hair-pin are bent outwards to prevent it from slipping into the wound and the rounded end is passed in. If two are used with their planes at right angles the wound will be kept more open. It is obvious that the same results can be attained by the use of any piece of wire, but hair-pins may be available when no other form of wire can be obtained.

THE PREVALENCE OF SMALL-POX.

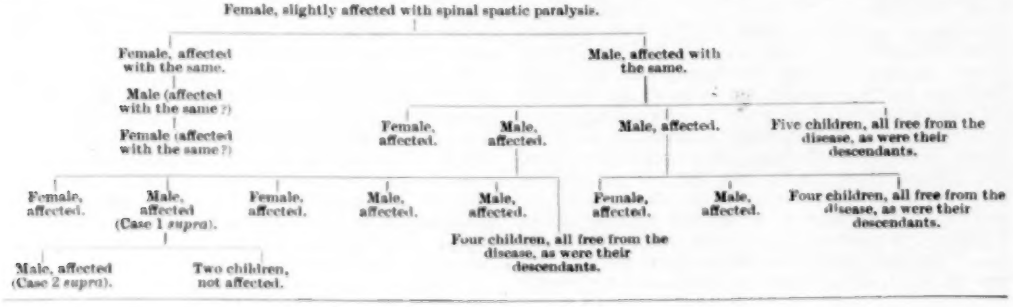
THE following figures show the number of patients admitted to the various hospitals of the Metropolitan Asylums Board for the dates mentioned: on Saturday, July 19th, there were 2 fresh cases; on Sunday, the 20th, there was 1 fresh case; on Monday, the 21st, there were 5 fresh cases; on Tuesday, the 22nd, there were 6 fresh cases; and on Wednesday, the 23rd, there were 2 fresh cases.

THE SOCIETY OF MEDICAL PHONOGRAPHERS.

THIS society will hold its next annual shorthand examination early in May, 1903. Two prizes will be offered, each of the value of £5, one for first-year students and one for students of more than one year's standing. The competition will be open to any registered medical student in the United Kingdom who has not taken a first prize at one of the society's previous examinations. It will be held simultaneously in London, Edinburgh, Dublin, and at any provincial medical centre in the United Kingdom at which not fewer than three candidates shall offer themselves. Intending candidates should send in their names as early as possible to Dr. P. G. Griffith, Bonhams, Farnborough, Hants, who will furnish them in return with a detailed prospectus of the examination. The latest date for receiving entries will be April 15th, 1903.

THE HEREDITARY NATURE OF SPASTIC SPINAL PARALYSIS: 14 CASES IN FIVE GENERATIONS OF A FAMILY.

THE separate existence of spastic paralysis of spinal as distinguished from cerebral origin is still doubted, but the hereditary and familial nature of the affection is acknowledged by all. In some families the cerebral type seems to occur in certain members (Bernhardt) and the spinal type in others, and in recent years various cases of the disease have been reported by Strümpell, Erb, and others. In the *Philadelphia Medical Journal* of June 21st last, Professor William G. Spiller of the University of Pennsylvania reports a remarkable instance which illustrates the hereditary and familial nature of spastic spinal paralysis—viz., its occurrence in 14 individuals belonging to five generations of a family. The following is the genealogical table:—


Female, slightly affected with spinal spastic paralysis.
Female, affected with the same.
Male, affected with the same.
Male (affected with the same?)
Female (affected with the same?)
Female, affected.
Male, affected.
Male, affected.
Five children, all free from the disease, as were their descendants.
Female, affected.
Male, affected (Case 1 supra).
Female, affected.
Male, affected.
Male, affected.
Female, affected.
Male, affected.
Four children, all free from the disease, as were their descendants.
Four children, all free from the disease, as were their descendants.
Male, affected (Case 2 supra).
Two children, not affected.

Two of the 14 cases were observed by Professor Spiller and the following is a brief report of each case. Case 1.—The patient was a man, aged 32 years, by occupation a telegraph operator. He was able to walk with difficulty owing to the prevalence of spinal spastic paralysis of hereditary origin. Both legs exhibited contractures and the left foot was in a position of equino-varus. The knee-jerks were exaggerated on both sides. Case 2.—The patient, a boy aged eight years, was the son of the above man. He suffered from spinal spastic paralysis and talipes equino-varus. His mother is a healthy woman and has borne two other children who seem to be free from any traces of the disease. A study of the genealogical table will serve to show that the disease is more liable to be transmitted from the parents to the elder than to the younger children of a family.

THE BAKERS' SUNDAY REST.

IT is always satisfactory to find workmen and their employers working in hearty coöperation for a common and beneficent purpose. A circular has been forwarded to us announcing that the London Master Bakers' Protection Society and the Amalgamated Union of Operative Bakers are making united efforts to maintain and to enforce the law of 1822 which prohibits the baking and delivery of bread on Sundays. It might be justly conceived that it is the business of the Government to enforce the laws of the land, but we know too well that this is only an ideal conception. Laws are enacted but no machinery is instituted to insure their application. This notably was the case with the Act of 1822 on bakeries and consequently the law is now openly violated. The bakers themselves have had to institute proceedings and have already spent upwards of £1000 in endeavouring to enforce the Sunday's rest. But it is difficult to produce evidence against the offenders, the proceedings against them are costly, and the magistrates interpret the law differently, suspect the prosecutors of interested motives, and only inflict small fines when they do not pronounce an acquitment. From the health point of view there can be no doubt that one day's rest in the seven is an imperative necessity, particularly in trades that are often conducted under unwholesome conditions. This is the case in bakeries. The fumes, notably of sulphur, escaping into the bakehouse or cellar from the oven have a marked effect upon the health of the journeyman bakers. This is demonstrated by the fact that the statistics of the societies giving sick allowances show that tall men employed in the trade are more frequently on the sick-list than are men of shorter stature. It is in the upper part of the bakehouses that the fumes accumulate, and the taller the man working there the more impure is the air he breathes. Such considerations emphasise the necessity of at least one day's complete rest in the week. On this point there is no division of opinion. But there are differences in regard to the day to be selected for rest. The Jew bakers—and they are numerous—want to rest on the

Saturday and the chief offenders against the law are members of the Jewish community or else such bakers as cater for the wealthy classes. As, however, the vast majority of the inhabitants of this country agree that Sunday should be the day of rest it is urged that the minority must conform to this custom. From the practical point of view there is much to be said in favour of this contention, for it greatly simplifies the task of inspection. But from the health point of view all that is needed is the strict observance of one day's complete rest in the seven, and if the Jews desire to select Saturday for that purpose it is only in keeping with the modern spirit of religious toleration to allow them to have their own way, even at the risk of creating denominational bakehouses. Perhaps a compromise might be possible. A law is always better enforced when all parties concerned approve of the law and we believe that the Jews would assent to compulsory rest on the Saturday. In any case rest there must be and we hope that the Home Secretary, who has been asked to receive a deputation on this subject, will see his way to realise this principle.

THE ETIOLOGY AND PATHOLOGY OF GRAVES'S DISEASE.

PROFESSOR CHARLES DANA of New York contributes an interesting article to the *New York Medical Journal* of June 14th last which throws some light on the vexed question as to whether exophthalmic goitre, or Graves's disease, is a neurosis or a glandular disorder associated with hypersecretion of the thyroid gland. Professor Dana concludes that the primary seat of the disease is in the nervous centres concerned with the innervation of the thyroid gland. An etiological factor the importance of which has been recognised only recently—viz., infection—also plays, says Professor Dana, a part in the production of the disease. Thus a study of reported cases will show striking instances of Graves's disease following upon fevers, sepsis, operative procedures, and pregnancies. In his own experience Professor Dana has seen three cases of exophthalmic goitre which developed after typhoid fever. One of the curious and instructive facts connected with the pathology of this disease is, according to Professor Dana, that in its acute fatal forms the nervous centres in the medulla oblongata or bulb seem to be exhausted and even paralysed. Of interest, too, are the changes found in the bulbar nuclei in old cases of the disease. Both these facts are shown in the following two cases, the second of which also illustrates the very rare incident of embolism in Graves's disease. In the first case the patient was a woman, aged 23 years, who was admitted to the Bellevue Hospital with severe headache and nausea. Inquiry showed nothing of importance in the family history. She was of nervous temperament but had been well generally with the exception that for the six years preceding her admission to hospital she suffered from occasional "fainting spells" but no convulsions. The symptoms of headache and nausea were attended with attacks of vomiting. She was found on examination to be quite anæmic and there were distinct exophthalmos and enlargement of the thyroid gland, especially of its right lobe. The carotids were unduly pulsatile and a thrill could be felt over the gland. The pulse was rapid and varied from 90 to 108 (tachycardia) and the respirations were 26 per minute. The temperature was 99·5° F. The left ventricle of the heart was somewhat enlarged and there was an intense anæmic murmur at the apex. The liver, the kidneys, and the urine were normal. Her nervousness now increased, tremors, at first slight, now became frequent and distressing, and the tachycardia became more pronounced. On the seventeenth day after admission she passed into a stuporous condition and was unable to swallow food or to talk distinctly. There were also a slight ptosis of the left eyelid and other symptoms which led to the belief that there was some lesion of the pons. The pulse-beats increased in frequency and the temperature rose to 107°, death occurring on the nineteenth day. The post-mortem examination disclosed a normal condition of the heart, the lungs, the kidneys, and of the other organs with the exception of the brain and the thyroid. The left crus cerebri was the seat of softening, but there was no hæmorrhage, and the sections showed that the lesion must have been due to thrombosis or embolism. The blood-vessels showed no evidence of atheroma or of syphilis. The second case was that of a woman, aged 45 years, with typical symptoms of Graves's disease, terminating fatally four months and one week after admission to hospital. The necropsy disclosed in this case striking degenerative changes in the bulbar nuclei of the hypoglossal, pneumogastric, and other nerves in the form of pigmentation and vacuolation of the cell bodies and a moderate degree of chromatolysis or loss of the Nissl granules of the nerve-cells. The foregoing histories show, adds Professor Dana, that Graves's disease at times runs an acute course, and that in cases of some duration decided changes are found in the nerve-cells of the pneumogastric, the hypoglossal, and other nerves within the bulb.

THE death is announced, on July 21st, of Dr. Carl Gerhardt. He died on his estate of Damberg in Baden. Dr. Gerhardt was a well-known authority on diseases of the lungs and on diseases of children. He was one of those who attended the Crown Prince of Germany, afterwards the Emperor Frederick, in his fatal illness. He it was who discovered the laryngeal growth early in March, 1887. He was the editor of "A Hand book of Children's Diseases," by various writers, which was published at Tübingen in 1877, his own contribution being an article on Abdominal Typhoid.

THE BUNGAY MEDICAL PRACTITIONERS AND THE HOME OFFICE.

WE have already commented[1] upon the situation produced by the action of the medical men in the district of Bungay, Suffolk, refusing to examine a child stated to have been indecently assaulted, on the ground that the fees for medical witnesses were totally inadequate. At the opening of the Bungay petty sessional court on July 17th (there being present Mr. H. Rider Haggard, in the chair, Mr. C. G. Kemball, and Mr. R. C. Mann), the matter was carried a stage further.

Superintendent ANDREWS handed to the Chairman a letter.

The CHAIRMAN asked if the Chief Constable wished that the letter should be read from the bench, and on Superintendent Andrews answering that this was so, said: The matter is this. Some two months ago a case came before this bench of criminal assault upon a child named Alice Jefferies by a man named Howes. In the course of the evidence that was offered it appeared that the child had not been examined by any medical man in the town because the medical men to whom application was made refused to carry out an examination. Ultimately the case was committed for trial; it went to trial and I believe that the man was convicted. The police communicated with the authorities upon the matter of the refusal of the medical men to examine the child. The authorities appear to have communicated with the Home Secretary and the Home Office has written a letter to the Chief Constable of East Suffolk who has now formally requested me to read this letter in court. I need hardly say that this bench has nothing to do with the question at issue between the medical men and the Home Office. The business of this bench in the question is only to try to arrange that the course of justice shall not be interfered with in future in any such cases that may be brought before it. The letter is as follows:—

Whitehall, 17th June, 1902.

SIR,—In reply to your letter of the 17th ultimo respecting the refusal of certain medical men to examine a child alleged to have been indecently assaulted on the ground that if called as witnesses in a criminal prosecution their remuneration would be insufficient, I am directed by the Secretary of State to say that there is no means of compelling a doctor to make the examination. Such refusals as those

[1] THE LANCET, July 12th, p. 85.

to which your letter refers must, in Mr. Ritchie's opinion, be considered as very discreditable to the medical men concerned, but he is glad to believe that such incidents are very rare. Doctors are, as a rule, perfectly willing to undertake an examination of this sort though aware that they will only be paid their expenses as witnesses.

Mr. Ritchie would suggest that in an exceptional case where, owing to the refusal of a medical man to make such an examination, there might be danger of a serious miscarriage of justice, you should communicate with the Director of Public Prosecutions who could, if necessary, employ an expert to make the examination.

As a general rule, however, such expenses ought not to be thrown on Imperial funds. I am, Sir, your obedient servant,

CHARLES S. MURDOCK.

The Chief Constable of East Suffolk, Ipswich.

The CHAIRMAN: It only remains for the Bench to discover what is the attitude of the medical faculty in this town upon the subject—whether they still decline to deal with such cases or not?

Superintendent ANDREWS: That I am not in a position to say, sir. I have not conferred with the medical men; the matter has been in the hands of Inspector Steggles, but I understand from him that they refuse to act in all cases of criminal assault because their remuneration is not sufficient.

The CHAIRMAN: Can you ascertain what is the position?

The CLERK: Mr. Tetley is here.

The CHAIRMAN: Then Mr. Tetley can speak for himself. (To Mr. Tetley.) Do you represent the feeling of the medical men in Bungay?

Mr. F. H. TETLEY: I am exceedingly obliged to you for allowing me to have the opportunity of hearing this letter read. I want it to be plainly understood on behalf of the medical profession in Bungay that the reason we objected to examine this case was as a strong protest against the miserably low fees which are offered to us for attending the quarter sessions or assizes to give evidence. The fee we get is a guinea a day and our railway ticket, and if detained over one day we get 2s. 6d. for our bed. I may state also that it is contrary to the ethics of the profession that in any cases where either life or limb is involved or in cases where it is a matter of alleviating human suffering the question of fee or reward scarcely ever—I hope never—enters the mind of a medical man in deciding whether he should give his services or not. But in these cases I certainly think that the State should remunerate us better than it does. I hope the magistrates do not think that we sprang a mine upon the police in the case referred to, for immediately after the case which went from here to the assizes in November last we distinctly told the inspector of police that in future under no conditions whatever until the remuneration was altered would we attend to these sort of cases. I may add that it is unfortunate that my colleague Mr. G. H. Ransome is away just now, but he is exactly of the same opinion as myself, and unless the remuneration is altered we shall decline to examine in any of these cases.

The CHAIRMAN: That is your fixed determination?

Mr. TETLEY: Yes; and of the medical men in Bungay.

Superintendent ANDREWS: Is it only the fee allowed for staying over-night that you complain of?

Mr. TETLEY: No, the fees generally.

The CHAIRMAN: I should like to say that although we have heard from Mr. Tetley that the police were given notice in November last that the medical faculty of the town refused to attend these cases of criminal assault, and similar cases, so far as I am aware I never heard of any such notice. The bench knew nothing of it, and it therefore came as a surprise to us when this child was brought up unexamined. We have listened to what Mr. Tetley has said and I again repeat that we have nothing whatever to do with the rights of the matter. The question at issue is one for the Home Office to deal with.

Mr. TETLEY: Mr. Chairman, could I possibly have a copy of that letter to send to THE LANCET? THE LANCET is our medical journal and it has taken up the matter.

The CHAIRMAN: The letter having been read here by the request of the police authorities is public property. May I make a suggestion? Would it not be possible for a medical man to be appointed for the division to deal with such cases?

Superintendent ANDREWS: I have been thinking the matter over seriously and I feel that the time has arrived when it should be so. This matter was duly reported to me by the inspector here and in turn reported by me to my superiors. It is, however, a unique case and there was a difficulty in dealing with it. But I do think the time has arrived when a medical gentleman should be appointed for each division so far as police matters are concerned.

Mr. TETLEY: We have been driven to this conclusion by degrees.

The CHAIRMAN: You have raised an important issue which has now got to be settled somehow.

Mr. TETLEY: We get no fees from our police cases at all. We may be rung up in the middle of the night for a man who may be hanged, but we get no fee whatever.

Superintendent ANDREWS: That is a matter for the coroner, except in cases of paupers when it comes on the parish.

Mr. KEMBALL: You object rather to be taken away from all your work for perhaps two or three days to the county assize (or sessions) at the present remuneration?

Mr. TETLEY: Yes.

Superintendent ANDREWS: We are in the same position with regard to architects and surveyors whose allowance is but 3s. 6d. a day.

The CHAIRMAN (to Superintendent Andrews): Perhaps you will convey to the Chief Constable the suggestion which the bench makes that the Home Office should be communicated with and asked if a medical man could not be appointed for each division. The suggestion made by the Home Office that the Director of Public Prosecutions should be communicated with scarcely seems to be adequate, because we all know that the delay might mean that any traces of an assault may have vanished by the time that any examination takes place at the instance of the Director of Public Prosecutions.

MR. W. G. GRACE, M.R.C.S.Eng., L.R.C.P.Edin., completed his fifty-fourth year on July 18th. Lately he has been devoting some attention to the game of bowls and last week he made his 200th three-figure score at cricket.

THE ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS FOR THE YEAR 1901.

PART I. REPORTS.

SECOND NOTICE.[1]

ONE of the most valuable parts of the chief inspector's report is the summary which he gives of the Factory and Workshops Act, 1901. It may be remembered that two Factory Bills were introduced concurrently into the House of Commons. Of these two Bills the first was framed with a view to consolidate the then existing Factory Acts of 1878, 1883, 1891, and 1895, and the Cotton Cloth Factories Acts of 1889 and 1896. The second Bill was drawn up to amend the existing law in certain particulars. These Bills passed through Committee and received some amendments in the process. The provisions of the second Bill were then added to the first Bill which proceeded in the form of a single measure and received the Royal Assent in August, 1901. A very important feature of the new Act is that the question of ventilation can now in many cases for the first time be efficiently dealt with by the factory inspectors. In previous Acts provisions had been made in regard to the amount of air-space which had to be provided for the workpeople, but there was no statutory provision to insure the supply of fresh air. There was a requirement that the temperature of the air should be reasonable, but there was a complete absence of any necessity on the part of the manufacturer to trouble himself about the purity of the air breathed by the workpeople. The manufacturer might, therefore, by any means he choose raise the temperature of the air at the expense of its purity. This is in fact what actually happened. In the case Deane *v.* Beach it was proved that the temperature of a room was raised "by heating it with gas jets and stopping up the chimneys." The magistrate before whom the case was tried regretted that he was obliged to dismiss the summons which was taken out under the section of an Act which reads thus: "In every factory or workship adequate measures shall be taken for securing and maintaining a reasonable temperature in each room in which any person is employed."[2] It was held on appeal at the High Court of Justice (King's Bench Division) that the magistrate was right in his decision. Mr. Justice Ridley held that temperature is clearly not the same thing as ventilation and that the temperature, which in this case was 61° Fahr., was reasonable and Mr. Justice Bigham pointed out that a reasonable temperature was the only thing aimed at in the section which was relied on by the prosecution. The magistrate who first tried the case gave it as his opinion that "such an abominable and disgraceful state of things should be remedied." The Act of 1901 which has accomplished this reform provides that sufficient ventilation must be maintained to render harmless all gases, vapours, and dust. Attention has been already called[3] to the extremely unsatisfactory condition of the ventilation in many of the cotton-weaving sheds, in which the air had been examined by Mr. W. Williams, the inspector of cotton cloth factories. In his introductory summary to the work done by his department, the Chief Inspector hardly gives sufficient prominence to the report on the cotton cloth factories and he omits to refer the reader to the part of the volume in which this report is to be found. The space at our disposal will only admit of a brief summary of the work done by the inspector who gives a full account of the investigations which he made in regard to the quality of the air in certain factories and in weaving sheds. During the year 1901 13 new cotton cloth factories were worked and there were 12 additional cotton-spinning rooms. The regulation of the amount of moisture in the air has already been a matter of considerable importance in these factories. If the air be too dry the process of weaving cannot be satisfactorily conducted, and if it be too moist the comfort of the workers is interfered with. On this question there were formerly many complaints and until the year 1889 no legal limit was put on the amount of humidity permissible and it

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[1] The first notice appeared in THE LANCET of July 19th, 1902, p. 172.

[2] 58 & 59 Vict. cap. 37.

[3] THE LANCET, Oct. 29th, 1901, p. 1146.

was not until that year that hygrometers were generally introduced into these factories. Improvements followed the introduction of these instruments and in 1896 a committee, under the chairmanship of Sir Henry Roscoe, made investigations which led to further changes in the law two years later. The condition of the workers has generally improved. Mr. Williams pays a pleasing tribute to the exertions of some of the large manufacturers who have raised the standard of sanitation and of comfort in their workshops to a higher level than that demanded by the letter of the law. They have been rewarded by an improvement in the quality of the work done and by the diminution in the sick rate of their work-people. The improvement in the purity of the air in these factories is a direct result of the recommendation of Sir Henry Roscoe's Committee which was enforced first as a regulation and which has now become a statutory provision and is incorporated in the Factory and Workshop Act, 1901.[4] The inspector of cotton cloth factories, in his report for the year 1900, gave a table showing the amount of improvement which had been affected in 35 weaving sheds.[5] In the report for the year 1901 he gives figures respecting tests made during the year 1901 in 43 weaving sheds containing an aggregate of about 7000 workers. A comparison of this table with the one published in the previous report shows that a further improvement has been effected during the year. A table made from the averages of these two sets of cases is given below. It shows in the case of 35 sheds in the year 1900 and in the case of 43 sheds in the year 1901 the number of volumes of carbonic acid found in 10,000 volumes of air[6] (1) before the improvement in ventilating arrangements was effected and (2) after the improvement in ventilating arrangements was effected. The figures in columns C and D are obtained by deducting from the amount of carbonic acid experimentally found to be present in the workrooms the amount normally present in the outside air of manufacturing towns which is estimated as four volumes per 10,000. The actual improvement effected is perhaps most easily realised by comparing these two columns.

Carbonic Acid (CO_2) in Cotton-weaving Sheds.

—	Number of volumes of carbonic acid (CO_2) per 10,000 volumes of air.		Approximate number of volumes of CO_2 per 10,000 due to respiration.	
			C	D
	Before improvement in ventilating arrangements.	After improvement in ventilating arrangements.	Before improvement in ventilating arrangements.	After improvement in ventilating arrangements.
For the year 1900, average of 35 cases	13	7·9	9·3	3·9
For the year 1901, average of 43 cases	12·6	7·7	8·6	3·7

The average of the respiratory impurity in the individual samples of air referred to in the table has been reduced to considerably less than one-half of the amount previously found and in some cases there was even a greater improvement than this. Considerable improvement undoubtedly has been effected in the health of the workmen through these changes, but no statistical details on the question are to be had as there is a general absence of records of sickness amongst weavers. It is, however, known that in ill-ventilated sheds it was a common thing in the summer for the workers to faint, and that this has not been the case since the improved conditions of ventilation have been introduced. Workmen say that they now feel less exhausted at the end of their day's work than they had formerly felt at midday. Manufacturers are in general agreement that the work has been better done since the operatives have been placed under less unhygienic conditions.

[4] "The arrangements for ventilation shall be such that during working hours in no part of the cotton cloth factory shall the proportion of carbonic acid (carbon dioxide) in the air be greater than nine volumes of carbonic acid to every 10,000 volumes of air."

[5] THE LANCET, Oct. 29th, 1901, p. 1146.

[6] The samples were taken from the "breathing level" and near to the centre of the shed in each case.

The ventilation of certain spinning rooms is still very unsatisfactory and the average length of life of a spinner is said to be shorter than that of a weaver. Many of the rooms in which spinning is done are sufficiently large to provide a fairly liberal amount of cubic space for each worker, but efficient provision is not made for the supply of fresh air. Sometimes it is said that the condition of the external air is too dry for admission into the rooms and that it would, if it were not first warmed and damped, act injuriously on the work. Moreover, the air of Lancashire towns is not free from smoke and fog, which are prejudicial to fine yarns. The impurity of the atmosphere in some of the mills is simply appalling. Some statistics were published from the report for the year 1900.[7] The following extract is from one of the tables given in the report for 1901; it shows the gross pollution by carbonic acid found in the air of some of the mills.

Carbonic Acid (CO_2) in Cotton Spinning Mills.

Number of test.	Process.	Approximate space per head in cubic feet.	Temperature in degrees Fahrenheit.	Number of volumes of CO_2 per 10,000 volumes of air.	Remarks.
5	Mule-spinning.	4700	89½	16·6	Five gas jets burning. Mechanically ventilated.
12	,,	9800	97	At least 40·2	—
13	,,	10,200	92½	At least 39·8	—
15	,,	9300	95	41·3	—

15 tests in all are quoted. Amongst these the highest space (approximate) per head in cubic feet was 12,660 and the lowest 2700. The temperature varied from 80° to 97°, in no case was it under 80°. The number of volumes of carbonic acid per 10,000 varied from 7·6 to 41·3. There is little cause for surprise that the life of a cotton-spinner should not, as a rule, be a long one. In one or two directions considerable improvements have of late taken place in the factories. It now rarely happens that water contaminated by sewage is used for moistening the air of the workrooms, but the practice of using impure water for that purpose was formerly quite a common one. The more general use of electricity for lighting purposes is a great boon. At the present time, the cotton-weaving factories which are lighted by gas in many instances contain air much contaminated by carbonic acid gas. In a table recording the results of 23 examinations of air from such factories the amount of carbonic acid gas was found to vary from 13·2 to 41·7 volumes per 10,000 volumes. It seems very remarkable that the floor of a weaving shed "is, as a rule, never washed." It is less a matter for surprise that "spitting on the floors is by no means unknown among weavers" and we have the official assurance that this is the case. The general filthiness of many of the weaving sheds may be fairly well gauged from the following gratulatory paragraph from the report. "There are," says Mr. Williams, "I am glad to report, a few sheds in Lancashire where the floors, except immediately under the looms, are washed weekly and the result is so extremely pleasing that it is to be hoped that the practice will extend to other sheds." The inspector of cotton cloth factories has done an enormous amount of useful work, but it is evident that more remains behind.

THE COUNTY OF DURHAM MEDICAL UNION.

THE fourth annual meeting of this union was held in the Town Hall, Durham, on June 23rd, Dr. E. JEPSON, J.P. (Durham), the President, being in the chair. There was a large attendance of members, amongst those present being Dr. James Murphy (Sunderland), the Vice-President; Mr. E. H. Davies (West Hartlepool), Mr. J. Arthur (Wingate),

[7] THE LANCET, Oct. 26th, 1901, p. 1147.

Dr. R. S. Hubbersty (Sunderland), Dr. Charles F. G. Mann (Washington), Mr. Mark A. Wardle (Bishop Auckland), Dr. J. Charles (Stanley), Mr. W. Galloway (Low Fell), Mr. J. Robertson Crease, sen. (South Shields), Mr. K. C. Hil (Jarrow), Mr. A. Galloway (South Shields), Dr. T. A. Beresford Kane (Byers Green), Mr. R. H. Botham (Staindrop), Dr. J. F. Armstrong (South Shields), Mr. A. T. Harrison (Sherburn Colliery), Dr. R. Gordon Bell (Sunderland), Mr. F. J. McArdle (Durham), Dr. John Brown (Bearpark), and Dr. Alfred Rutter (Ryhope).

The PRESIDENT intimated the receipt of letters and telegrams from several members who were unable to be present and he also mentioned that since the half-yearly meeting two members—namely, Dr. R. Hanton (West Hartlepool) and Dr. G. S. Somerville (Stockton)—had died and on the motion of the PRESIDENT, seconded by Dr. MURPHY, votes of condolence with the families of Dr. Hanton and Dr. Somerville were unanimously passed.

The PRESIDENT then delivered the following address:—"Gentlemen,—If any medical gentlemen are present who are not members of the union I beg to offer them a very hearty welcome and if they will be good enough to send their names up to the chair they shall be properly introduced and welcomed. I congratulate the members on entering on the fourth year of the existence of the County of Durham Medical Union. During the first part of our existence we fought for the 9*d*. Now that struggle is nearly over we have to look onwards and to see that the principles of the union are properly maintained. I do not want to be uncharitable but I must say that men who have once given their allegiance to the union and then afterwards turned against it are not worthy to be retained in our society. In the treatment of such and for blacklegs a tribunal is about to be established, and if they do not satisfy that tribunal they will be boycotted by the whole profession in the North of England. I was asked a question the other day which, in the hurry of the moment I answered improperly. The question is, How shall we act in a case of emergency when a blackleg is in charge of a case and one of us is suddenly called upon to help? The proper thing to do is to give that help and as soon as convenient retire from the case; but where there is time for deliberation, as in a case of cancer or phthisis, then we must remember the principles of our union and if a blackleg is in charge of such a case we should decline to meet him in consultation and if much pressure is put upon one of us to treat the case it can only be done on the retirement of the blackleg. We have passed resolutions to the effect that any medical man who shall knowingly meet in consultation any practitioner who is actively opposed to the union shall himself be considered as one opposed to the union. Also an unwritten rule is well understood—viz., that a medical practitioner succeeding a blackleg who was actively opposed to the union whilst the old practitioner is still kept out of his practice, shall also be considered to be a blackleg. A little time ago I met a blackleg at a post-mortem examination. Fortunately, I had a friend with me who was a loyal member of our union, and we managed to make it awkward for the blackleg.

Mr. WARDLE said that he had the greatest possible pleasure in moving the re-election as President of Dr. Jepson. He had worked very hard for the union and the success which had been achieved was largely due to his efforts.

Dr. ARMSTRONG seconded the motion, which was carried unanimously.

On the motion of the PRESIDENT, seconded by Dr. DAVIS Dr. Murphy was unanimously re-elected Vice-President.

Messrs. Graham and Shepherd of Sunderland, were re-elected joint secretaries, treasurers, and solicitors of the union for the ensuing year. Dr. R. Blair (Sunderland), Dr. C. F. Brears (Southwick-on-Wear), Dr. J. C. B. Carruthers (Castletown), Dr. J. Johnson (Birtley), Mr. D. F. O'Kelly (Boldon Colliery), Dr. W. Kerr Russell (Sunderland), Dr. R. H. Dix (Sunderland), Dr. W. Hunter (Sunderland), Dr. J. Duncan (Washington), and Dr. Ardrach (South Shields), were elected members.

The treasurers' statement, showing a balance of £14 19*s*. 1*d*. in favour of the union, was submitted and adopted.

A report of the council together with reports from the local committees of the Sunderland, Stanley, and Durham districts were read and verbal reports were also made by representatives from the districts of Jarrow, Hebburn, and Bishop Auckland.

Some discussion then took place on the matters contained in the reports after which they were adopted.

One of the secretaries (Mr. A. T. Shepherd) drew attention to the resolution passed at the last half-yearly meeting in reference to the exorbitant commission charged for collecting practitioners' subscriptions, and stated that very few members had given instructions for the sending out of the circular. He also read a letter which had been received from a large colliery company which was considering the matter in connexion with its collieries. After discussion in which Dr. Mann, Mr. Wardle, and others took part, pointing out the difficulty of individual medical men moving in the matter, it was resolved, on the motion of Dr. Mann, seconded by Mr. Wardle, that local committees for small areas should be formed to take common action in obtaining a reduction in commission paid at collieries and works where such was over 5 per cent., so that united and simultaneous action locally might be taken for this purpose.

The secretaries having read certain resolutions passed at a meeting of the consultants of the district held at Newcastle-on-Tyne on June 11th, and also resolutions which had been passed at joint meetings of the councils of the union and the Northumberland Association, held on June 2nd and 16th, in reference to the formation of a special committee for the purpose of dealing with practitioners actively opposed to the objects of the associations and members acting in an unprofessional manner, and after discussion, in which Dr. Murphy, Dr. Bell, and others took part, it was resolved, on the motion of Mr. GALLOWAY, seconded by Mr. HILL, that the resolutions of the consultants be approved and adopted. It was resolved, on the motion of Dr. ARMSTRONG, seconded by Dr. BELL, that Dr. Hubbersty and Dr. J. H. Hunter (South Shields) should be the representatives of the union on the proposed special committee.

The meeting then proceeded to the consideration of a recommendation of the council as to the expulsion of certain members. One member's expulsion was suspended for one month in order that he might reconsider his position, and three members were expelled from membership.

In accordance with notice given it was moved by the PRESIDENT, and seconded by Mr. GALLOWAY, that the following addition should be made to Rule 7:—

> Each local committee shall have power to nominate and select one or more members for election on the council, the names of the members selected to be forwarded to the secretaries not later than the 31st May in each year.

A hearty vote of thanks to the President brought a successful meeting to a close.

Looking Back.

FROM

THE LANCET, *SATURDAY, JULY 24*, 1824.

To the Editor of The Lancet.

Dublin, July 5, 1824.

SIR,—I am induced to communicate, through the medium of your publication, an interesting and remarkably successful operation, lately performed by Mr. Crampton, the surgeon general; as it shews the ease and safety with which a portion of the inferior maxillary bone may be removed, and insures relief to a class of patients usually abandoned to a hopeless fate—those affected with osteo sarcoma of the lower jaw; a disease which, originating in the internal structure of the bone, leaves no hope of remedy but by the total removal of the portion of bone in which it is situated

Eliza Howard, the subject of this operation, was a delicate woman of about twenty-one years of age, and had been afflicted with the disease for upwards of five years. The entire of the disensed portion of bone, forming a prominent tumour, three inches in depth, and extending from the second small molar tooth of the right side to the second large molar of the left, was, in a few moments, removed by means of the chain-saw, introduced by a curved needle behind the bone. The flap having been replaced, and secured by a few points of interrupted suture, the whole united by the first intention, the patient was able in a fortnight to walk a considerable distance, from the County Infirmary to Stevens's Hospital, where she was inspected by the Medical officers of that establishment; the effect of the operation being externally perceptible only by a slight depression on the left side. The extremities of the divided bone have since considerably approximated, the space

between them being occupied by a kind of ligamentous union of much consistency. Should any inconvenience remain, it can be easily obviated by a simple artificial contrivance. It is to be hoped that a full and accurate detail of so interesting an operation will be speedily published; but even this slight notice may lead to its immediate adoption in many cases which are perhaps at this moment consigned to an hopeless fate.

A similar operation was performed on Friday last, with the most complete success, by Mr. CUSACK, Surgeon to Stevens's Hospital, who removed a still more extensive portion of the maxillary bone, with a tumour several inches in circumference. T.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 9112 births and 4123 deaths were registered during the week ending July 19th. The annual rate of mortality in these towns, which had been 15·1, 15·4, and 14·3 per 1000 in the three preceding weeks, increased again last week to 14·5 per 1000. In London the death-rate was 14·1 per 1000, while it averaged 14·6 in the 75 other large towns. The lowest death-rates in these towns were 5·5 in Hornsey, 5·6 in Handsworth, 6·7 in Walthamstow, 6·8 in Newport (Mon.), 6·9 in Willesden, 7·7 in King's Norton, 8·1 in Great Yarmouth, and 8·6 in Aston Manor; the highest rates were 18·2 in Liverpool, 18·5 in Manchester, 18·8 in Stockport, 21·4 in Rhondda, 23·2 in Stockton-on-Tees, and 25·9 in Merthyr Tydfil. The 4123 deaths in these towns last week included 558 which were referred to the principal infectious diseases, against 522 and 533 in the two preceding weeks; of these 558 deaths 129 resulted from measles, 119 from whooping-cough, 117 from diarrhœa, 64 from diphtheria, 59 from scarlet fever, 43 from "fever" (principally enteric), and 27 from small-pox. No death from any of these diseases was registered last week in Hornsey, Walthamstow, Hastings, Great Yarmouth, Devonport, Handsworth, or Preston; in the other towns they caused the greatest proportional mortality in Portsmouth, Plymouth, Rochdale, Stockton-on-Tees, Gateshead, Rhondda, Merthyr Tydfil, and Swansea. The highest death-rates from measles occurred in Portsmouth, Reading, West Bromwich, Bury, Rochdale, Gateshead, Stockton-on-Tees, and Rhondda; from scarlet fever in Gateshead; from diphtheria in Tottenham and Rhondda; from whooping-cough in Leyton, Portsmouth, Southampton, Hanley, Smethwick, Grimsby, and Barrow-in-Furness; from "fever" in Ipswich, Stockton-on-Tees, and Merthyr Tydfil; and from diarrhœa in Plymouth, Hanley, Wolverhampton, Bootle, Rotherham, and Middlesbrough. The fatal cases of small-pox registered last week included 15 which belonged to London, eight to Swansea, three to Gateshead, and one to Bootle. The Metropolitan Asylums hospitals contained 459 small-pox patients on Saturday, July 19th, against numbers declining from 1515 to 579 on the 12 preceding Saturdays; 48 new cases were admitted during the week, against 129, 58, and 51 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2496, 2432, and 2352 at the end of the three preceding weeks, had risen again to 2377 at the end of last week; 332 new cases were admitted during the week, against 276, 255, and 272 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 194, 168, and 159 in the three preceding weeks, further declined last week to 155, and were 11 below the corrected average. The causes of 50, or 1·2 per cent., of the deaths in the 76 large towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Leicester, Nottingham, Salford, Leeds, Newcastle, and in 46 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, St. Helen's, Warrington, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 16·3 and 16·2 per 1000 in the two preceding weeks, further declined to 14·7 per 1000 during the week ending July 19th, but showed an excess of 0·2 per 1000 over the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·2 in Leith and 13·6 in Greenock to 15·3 in Edinburgh and 20·2 in Dundee. The 475 deaths in these towns included 15 from measles, 15 from whooping-cough, 13 from diarrhœa, and one from scarlet fever, but not one from either small-pox, diphtheria, or "fever." In all 44 deaths resulted from these principal infectious diseases last week, against 66 and 62 in the two preceding weeks. These 44 deaths were equal to an annual rate of 1·4 per 1000 which was 0·6 per 1000 below the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 15, 13, and 22 in the three preceding weeks, declined again last week to 15, of which seven occurred in Edinburgh, four in Glasgow, and two in Dundee. The deaths from whooping-cough, which had been 14, 16, and 14 in the three preceding weeks, rose again to 15 last week, and included seven in Glasgow, three in Dundee, three in Edinburgh, and two in Aberdeen. The fatal cases of diarrhœa, which had been 16, 24, and 15 in the three preceding weeks, further declined last week to 13, of which six were registered in Glasgow, two in Edinburgh, two in Dundee, and two in Aberdeen. The deaths referred to diseases of the respiratory organs in these towns, which had been 101, 87, and 74 in the three preceding weeks, further decreased to 62 last week, and were 17 below the number in the corresponding period of last year. The causes of 25, or more than 5 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 19·1 and 16·9 per 1000 in the two preceding weeks, rose again to 20·2 per 1000 during the week ending July 19th. During the past four weeks the death-rate has averaged 19·0 per 1000, the rates during the same period being 14·5 in London and 17·0 in Edinburgh. The 147 deaths belonging to Dublin registered during the week under notice were 24 in excess of the number in the preceding week, and included 14 which were referred to the principal infectious diseases, against nine, 11, and 17 in the three preceding weeks; of these, eight resulted from measles, four from "fever" one from diphtheria, one from diarrhœa, and not one from either small-pox, scarlet fever, or whooping-cough. These 14 deaths were equal to an annual rate of 1·9 per 1000, the death-rates last week from the same diseases being 2·2 in London and 1·9 in Edinburgh. The fatal cases of measles, which had been six in each of the two preceding weeks, increased last week to eight; the four deaths referred to "fever" corresponded with the number in the preceding week; while the mortality from diarrhœa showed a decline. The 147 deaths in Dublin last week included 16 of children under one year of age and 31 of persons aged upwards of 60 years; the deaths of infants were slightly below the number in the previous week, while those of elderly persons showed a slight excess. Eight inquest cases and two deaths from violence were registered, and 69, or nearly one-half, of the deaths occurred in public institutions. The causes of four, or nearly 3 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon W. Eames to the *President*, additional, for three months' course of hospital study. Staff Surgeons: G. Hewlett to the *President*, additional, for three months' course of hospital study; E. St. M. Nepean to the *Zelus* and F. J. Burns to the *Royal Sovereign*.

ARMY MEDICAL STAFF.

Colonel James A. Clery, C.B., R.A.M.C., to be Surgeon-General, vice A. F. Preston, retired. Dated May 23rd, 1902.

ROYAL ARMY MEDICAL CORPS.

1st Life Guards.

The appointment of Major Nicholas C. Ferguson, C.M.G., from the Royal Army Medical Corps to be Surgeon-Major, which was notified in the *London Gazette* of Feb. 14th, 1902, is cancelled.

Major Benjamin William Chatterton Deeble, from the Royal Army Medical Corps, to be Surgeon-Major. Dated July 23rd, 1902.

To be Colonels:—Lieutenant-Colonel William G. Pratt, on augmentation (dated April 1st, 1902); Lieutenant-Colonel William E. Webb, vice J. A. Clery, promoted (dated May 23rd, 1902.

Lieutenant M. G. Sterling assumes medical charge of the Louise Margaret Hospital District Staff, Army Pay Department, Fire Brigade, Military Police, Army Chaplains' Department, Model School, and Army Veterinary Department not attached to units at Aldershot.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major E. L. Freer to be Surgeon-Lieutenant-Colonel.

MENTIONED IN DESPATCHES.

In a despatch from Lord Kitchener, dated Pretoria, June 1st, to the Secretary of State for War, the following names are mentioned:—

Surgeon-Major J. A. Devine, Canadian Mounted Rifles, for good service in the action at Boschbult on March 31st.

Civil Surgeon A. L. Hoops who, in the same action, was four times wounded, and when no longer able to move about refused to be taken to the rear and remained in the firing line giving directions for the treatment of other wounded men.

Lieutenant T. F. Ritchie, R.A.M.C., for valuable work in the action at Holspruit on April 1st.

Civil Surgeon R. F. Williams, R.A.M.C., for gallantry in action at Moolmanspruit on April 20th.

Serjeant E. Haynes, R.A.M.C., is mentioned for gallantry under heavy fire at close range, on Jan. 29th, at Sweethome, Orange River Colony.

THE MEDICAL STAFF COLLEGE.

It is understood that, pending the erection of permanent buildings, the War Office authorities have made temporary arrangements for renting some of the laboratories of the Royal Colleges on the Thames Embankment. There was, we believe, some talk of the new military hospital for the Guards near the Tate Gallery being utilised for the purpose of clinical instruction, but it is questionable whether the site as a substitute for Netley would prove sufficiently large, and in any case provision would have to be made for the study of tropical diseases. We think it would be quite possible to institute some general arrangements whereby the medical schools and hospitals and post-graduate courses of instruction in London could be made available for army medical officers and candidates. As regards tropical diseases there are usually a large number and variety of cases of this kind in the Royal Victoria Hospital at Netley, and, for the present at any rate, it might also be possible to arrange for the army medical candidates to spend a portion of their course of instruction there.

A VISIT OF INDIAN TROOPS TO THE HOUSE OF COMMONS.

Medical officers who have served in India and have been brought in contact with Indian troops must have noticed that they very commonly and naturally, as it were, comport themselves in a dignified, respectful, and fitting way when any occasion calls upon them to do so. A little incident at the House of Commons the other day was a case in point. A detachment of Bengal Lancers in their handsome uniform paid a visit to the House on July 21st and arrived there just before the time of its sitting. As the Speaker's procession passed through the lobby of the House the soldiers stood at attention and saluted in military fashion the mace and Speaker as they passed. The situation was both picturesque and effective as well as a spontaneous exhibition of respect and good manners such as are not always manifested by people in this country.

A NEW FORM OF FIELD EQUIPMENT FOR GERMAN MILITARY SURGEONS.

According to the *Deutsche Militararzt Zeitschrift* for January last a new equipment for army medical officers has been devised and sanctioned. It consists of a black leather satchel lined with canvas and fitted with pockets for the reception of instruments, medicines, and dressing material. The outside case measures about 9 by 7 by 1·5 inches, and in shape resembles an enlarged card-holder. To keep it in position on a level with the lower border of the tunic there is a strap which is to be worn beneath that garment. Notwithstanding its small dimensions the satchel contains all the customary instruments, with the exceptions of a percussion-hammer, a pleximeter, and a magnifying lens. The price, fitted satchel, is said to be about 12*s*.

THE CANADIAN RED CROSS SOCIETY.

A tastefully printed report of the Canadian branch of the British National Society for Aid to the Sick and Wounded in War has just been issued. Captain Charles A. Hodgetts, A.M.S., the honorary secretary, in a letter dated Toronto, April 30th, 1902, gives an epitome of the society's work, stating that after a careful review of letters and reports in the possession of the society he has computed the value of the contributions in kind received by the central council and the several local branches, as well as those forwarded by municipalities and private citizens to South Africa through Red Cross channels, to be $23,552.75, while the total cash receipts of council and branches were $58,826.64, making the total cash value of the society's work $82,379.39.

RECRUITING.

Now that the war is over and the popular enthusiasm that it excited among the recruiting classes has ceased we shall be better enabled to judge as to what will be the annual average number of recruits joining the army under ordinary circumstances. We have always thought, and have often said, that the army authorities would do better by making their recruiting offices far more attractive-looking and by placing them in main streets and thoroughfares instead of locating them in back streets and out-of-the-way sites.

ROYAL VICTORIA HOSPITAL, NETLEY.

Surgeon-General G. J. H. Evatt, P.M.O., 2nd Army Corps, has been appointed the president, and Surgeon-General E. Townsend, C.B., C.M.G., and Colonel M. E. R. Rainsford, C.B., members, of a board ordered to assemble at the Royal Victoria Hospital, Netley, to consider and to report as to what steps should be taken to decentralise the custody of hospital equipment and stores and to consider the best method of accounting for hospital diets at that institution.

THE SEWAGE WORKS IN THE ALDERSHOT DISTRICT.

Lieutenant-Colonel Alfred S. Jones, V.C., A.M.I.C.E., has been appointed manager of all sewage works in the Aldershot district by the Secretary of State for War, which may be taken as a proof that the authorities are well satisfied with the results of his past seven years' work on the restoration and management of the Camp Farm and its Sandhurst branch.

Correspondence.

"Audi alteram partem."

INSANITY AND THE DEATH PENALTY.

To the Editors of THE LANCET.

SIRS,—The perusal of your annotation in THE LANCET of July 19th, p. 165, on Insanity and the Death Penalty brings to my mind that on various occasions in print, and very constantly for many years as a teacher of medicine, I have insisted on one point too often overlooked or thoughtlessly perverted—viz., that "insanity," *per se*, is not (as we medical men observe it in nature and fact) a definite state which ought either to absolve a man completely from moral responsibility on the one hand, or on the other to be regarded as consistent with the extreme penalty of the law in a capital offence. I regret that I am not at this moment in a physical condition to permit of a more complete development of this argument; but several circumstances have combined of late to lead to an expectation that even a brief communication on the subject in your columns may at least do some good in quickening the apprehension both of medical and legal experts as regards some of the anomalies referred to in your excellent articles on the Dorchester case. The case of Musolino the brigand,[1] although we are not yet in possession of the full medico-legal details, seems to be an object-lesson as to how far the fanatics of the Lombroso school may be expected to go in the way of finding theoretical excuses for flagrant and deliberate, not to say ingrained and habitual, crime. At the same time we are receiving from the United States[2] the

[1] THE LANCET, June 28th, 1902, p. 1841.
[2] See Boston Medical and Surgical Journal, July 3rd, p. 27.

inquiry, "Is Jane Toppan responsible?" which means that the law courts of Massachusetts have deliberately excused on the ground of insanity a woman who, according to her own confession (which may, however, not be trustworthy), had poisoned over 30 patients under the very eyes of their medical attendants while she was acting as a nurse and reputed in all quarters to be one of the most careful, attentive, and sympathising of nurses. In the Dorchester case (Simmons) it is, I think, fairly arguable that there may have been some more or less insane tendencies, or even (as stated) "minor epilepsy"; but that a crime so deliberate, so remorseless, and so dangerous to society at large as that of Simmons should not be punished (in a legal sense) at all is (and I agree in this with your correspondent Dr. M. Greenwood [2]) a real failure of justice and a practical encouragement to evil-doers. In like manner, it seems impossible, in the light of average common sense, to maintain that Jane Toppan (whatever she may have been on her own confession, sexual pervert or not) was in any just acceptation of the word irresponsible, even if the list of her poisonings was to be cut down from 31 to one. To acquit her of 31 murders on this account would be just about as reasonable, from the medical point of view, as would have been the holding of Musolino the brigand irresponsible by reason of Lombroso's stigmata, or his theory of the "criminel né."

In dealing with the case of Simmons, Dr. Greenwood writes: "The object of all punishment is to deter." I agree; but it is apt to be overlooked in these days of refinement and humanitarianism (and I am not to be held as saying anything against these) that the object of *legal* punishment, as opposed to the vendetta, lynch law, or any other less regular form of the *lex talionis*, is to satisfy, in some measure, the primary and irrepressible instinct of vengeance on the part of society at large. Civilised society, under the influence of Christianity, has proclaimed aloud that this irrepressible instinct must be controlled and regulated by law. "Avenge not yourselves" in the Christain dispensation is the further and logical development of the principle that vengeance belongs to a higher power, and that "the powers that be are ordered by God." The law accordingly undertakes on the part of society and on the part of that higher power to restrain that primary instinct by dealing equitably, and after full and deliberate inquiry, with all causes of offence. But the law can never rightly discharge this great office, either by hanging persons who are manifestly so insane as to be really irresponsible or by refusing to condemn at all persons of the type of Simmons or Jane Toppan. The question of insanity, if raised at all, should be treated legally as one of degree; and if (as Sir Matthew Hale said long ago) it would be an intolerable outrage to subject to the death penalty a man notoriously and wildly insane it should, on the other hand, be at least possible to give a verdict—*guilty, though insane*, with the result of qualifying, but not of completely extinguishing, the idea of punishment. But to enter now into the difficult question of how this is to be accomplished would carry me too far. I will only add, therefore, that on the *legal* theory of insanity as a state involving complete irresponsibility, not one of our asylums could be conducted on modern principles. If the insane are to be held irresponsible, there is nothing for it but to revert to the old methods of restraint pure and simple; but every enlightened man nowadays knows that it is not so.—I am, Sirs, yours faithfully,

Edinburgh, July 19th, 1902. W. T. GAIRDNER.

THE CAUSE OF INEQUALITY OF PUPILS IN CASES OF THORACIC ANEURYSM.

To the Editors of THE LANCET.

SIRS,—We much regret the apparent misuse of a quotation from Sir W. T. Gairdner's article in Allbutt's System of Medicine concerning the inequality of pupils associated with thoracic aneurysm against which he protests. The quotation was made from the recent writings of one of the highest authorities on the subject to show what seemed to be the current teaching on this point. On reading that portion of the article again in the light of Sir W. T. Gairdner's explanation we cannot but feel that there was some excuse for our receiving the impression that he held the view which we ascribed to him.

We ought, no doubt, to have laid greater stress on the cautions which he enjoins to exclude those cases where the inequality is due to causes other than interference with the sympathetic. But we do not gather from the article even now that he supposed that there was any causal relationship between a thoracic aneurysm and anisocoria other than that brought about by paralysis of the sympathetic. We are much gratified to find that Sir W. T. Gairdner agrees in the main with the observations on which our criticism of the existing theories was based. We can only express our deep regret that in our quotation from his work we misrepresented his views upon the subject and trust that he will accept this explanation and apology.

We are, Sirs, yours faithfully,

R. CECIL B. WALL.
E. W. A. WALKER.

July 19th, 1902.

[2] THE LANCET, June 28th, p. 1859.

OBSERVATIONS ON DIET.

To the Editors of THE LANCET.

SIRS,—Permit me through you to thank Dr. Harry Campbell for the tone of his reply in your issue of July 12th to my letter of June 14th, especially for the "sweet reasonableness" of its general tenour. I must also express my gratification for the cognomen "procrustean" if it be taken in the pro-Boer sense as advocating a good nutritious "crust" to the aged. A sly dig! There is nothing in Dr. Campbell's letter to "darken my brow with the angry 'flush' nor mantle my cheek with the shameful 'blush'." Another!

In his letter, taking the first paragraph where he speaks of the vital fires of the aged as "smouldering" and "feebly flickering," in support of apparent "spare diet" generalisation, may I draw attention to the following. If an aged person receives an injury to his tissues do these "smouider" and "flicker"? that is, if surgically treated under antiseptic precautions. Do they act in any way differently, as a general rule, from the tissues of younger persons? Nature supplies the part injured by means of the reactionary reflexes and surgical inflammation (aseptic) with an excess of nutriment and the tissues at once become young, take on embryonic action, and the injury heals up right away. What is possible in a part I contend is possible to a certain extent in the whole. That is my contention in advocating "good, full, generous diet." Is not the above mainly a nervous process? And is not the loss of power in the nervous system of the aged the main factor to combat?

In the second paragraph of his letter Dr. Campbell states that "the healthiest old people are spare eaters." I contend that they are if healthy, eating well, and eating for themselves a "good full generous" diet as they eat all they want or crave for; they certainly do not support the spare-diet theory if they do not support the opposite contention.

In the third paragraph Dr. Campbell cites certain clinical examples as putting me out of court. I would add to these cases of sarcoma of the upper jaw, cancer of the stomach and various conditions of cerebro-spinal degeneration in their last and hopeless stages as equally crushing arguments against the "good, full, generous diet." Does Dr. Campbell pretend that they are unanswerable contentions for the "spare diet" or only for diet *secundum artem* to suit case and condition? The first case of nose-bleeding which he cites might be also hepatic cirrhotic or hepatic diabetic as well as one of high pressure; it might also to a certain extent be venous. Where would medical skill come in if an attempt were not at once made to correct matters? What were a nutritious dry diet, calomel, hydragogue purgatives, iodide of potassium, potassium nitrate, strophanthus, &c., intended for? A full nutritious diet will be of most service after suitable measures than the reverse. His uræmic septuagenarian I have met and successfully treated by good, full, generous diet after introducing him therapeutically to Broadbent, Morison, Bradbury, and others. His octogenarian with fixed thorax is not hopeless, for no doubt some modern surgical Philistine will perhaps some day proceed to resect his ossified costo-sternal cartilages and attempt to make false joints which, if he succeeds, will deprive the orthodox physician person of another of his pet cases which he does not now benefit—"spare" or "full" diet. I surmise in the event of success a full diet would be more desired than a "spare" one. Most decidedly there are cases which a full diet will not benefit; but, on the other hand, a spare diet will get them no further towards recovery.

Nevertheless, worded as was Dr. Campbell's appeal in his article, of which I complained, he appeared to call upon us

to give "spare diet" as a general rule. I contested that and am glad to have been of assistance to Dr. Campbell in giving him an opportunity to make himself clear and thus to add lustre to his article.

From actual observation of old persons I find that on spare diet their "driving apparatus"—the nervous system—begins to go, but on a good full generous diet signs of cerebral degeneration, softening, inability to swallow, &c., pass away, and with them cardiac irregularity, dyspnœa, &c., mend to a great extent, and with this liver, lung, and kidney disabilities are markedly alleviated. I must also thank Dr. Campbell for not adopting that well-known method of controversy, which is either to imagine your opponent a fool who does not know what he is about, or to twist and to turn and to misconstrue his statements so that he appears to casual readers in the light of a fool; for this much thanks. I am made to appear, according to Dr. Thomas Dutton and Dr. Eric Pritchard, as advocating the following laughably absurd conditions, that a male or female nonagenarian (quoted by Dr. Dutton) should with my approval, habitually reel home at 2 A.M. under the load of a 27-course dinner with the usual vinous accompaniments, and so on.

I think, Sirs, I can, even at the risk of being charged with arrogance, before finally retiring, enumerate the casualties of this guerilla contest. Dr. Pritchard is metaphorically killed, slain whilst taking cover behind a post-prandial anthill which he mistook for something more substantial. Dr. Dutton has come in as a "tame Bojer" on terms of a "nutritious diet," and finally terms are signed with our "Botha of Diet," Dr. Campbell, by my paying the 3,000,000 sterling in admitting that some cases are not good to "cram," yet I prefer from experience a "good full generous diet" in most cases.

I am, Sirs, yours faithfully,

July 21st, 1902. F. W. FORBES ROSS, M.D. Edin.

To the Editors of THE LANCET.

SIRS,—In his article, "Observations on Diet," Section IV., appearing on p. 1850 of your issue of June 28th, Dr. Harry Campbell quotes a writer as follows: "Man is carnivorous. It is his misfortune, but it is so"; and continues: "One would willingly think otherwise, for who can contemplate with equanimity the wholesale slaughter of animals, with all its gruesome accompaniments, in order that we may feed on their flesh? But facts have to be recognised." This statement requires considerable modification. Most men who are carnivorous are so from choice or influence of custom, not, as is implied, by the necessities of their organism, many of the most eminent of our scientific authorities (Owen, Ray, and others) who are best qualified to pronounce an opinion on this point have held that structural anatomical evidence proves conclusively that man is a "frugivorous" animal, and my own personal experience and observation of others have demonstrated to me that man can not only "live," but can attain to a high standard of vigorous and healthy life, on a diet which does not necessitate the "wholesale slaughter of animals, with all its gruesome accompaniments," which Dr. Campbell (in common with all men of humane feelings) deplores. And here, I may say, I cannot understand the mental attitude of one who is *really* desirous of abolishing or lessening the vast amount of suffering so caused and yet refrains from the first and obvious step of at once ceasing to be a participator in its infliction by abandoning flesh as food because of certain minor difficulties which may arise as to the disposal of bull calves and cockerels should he still find it necessary to partake of "animal products." It is indeed a case of "straining at a gnat whilst swallowing a camel." No beneficent reform would ever be inaugurated did men wait for the satisfactory solution of every minor question connected with it before taking the first radical step.

My personal experience is as follows. Some eight years ago (having just reached my fortieth year), after a perusal of Dr. A. Haig's book, "Uric Acid as a Factor in the Causation of Disease," I reduced my consumption of flesh food to a minimum (an average of one pound per week) with the result that the periodic headaches, spells of mental depression and slight attacks of muscular rheumatism, from which I had suffered for some years, gradually ceased to trouble me. Nearly three years ago I adopted an absolutely non-carnivorous diet for ethical reasons. The results have been more than satisfactory; "uric acid" symptoms no longer trouble me; I have gradually experienced a sense of general wellbeing, health, and energy which recalls my boyhood's days. The "sensation of fatigue" after long-continued and arduous muscular or mental exertion is very much less than aforetime, and more speedily recovered from, and my resistance to disease is increased as demonstrated by the fact that whereas I used to suffer in winter from a series of "heavy colds in the head," for the past two years I have only had two such attacks which cleared up in three days instead of taking the usual three weeks or so. I am acquainted with at least 20 abstainers from flesh foods within a radius of 12 miles (including two medical men, architects, lawyers, &c.) whose experience has been substantially the same as my own and whose consciousness of the improvement in their physical wellbeing is such that they unanimously declare that they will never return to their former diet. They simply smile at the suggestion that their non-carnivorous diet produces "tendency to obesity" or "lowers their energy and resistance to disease," for experience has taught them that, in their cases at least, such theories are without foundation.

The fact that the number of meals and quantity of food taken tends to increase among flesh-eating communities is a significant commentary on the alleged superior sustaining qualities of flesh. Such increase, in fact, is due to quite another cause—i.e., the "extractives" of flesh (consisting mainly of the effete products of cell metabolism and belonging to the "uric acid group") are true stimulants, and following the "stimulant" period of their action comes the inevitable reaction with depression demanding fresh supplies of stimulant for its removal. Among non-flesh-eaters the invariable tendency is to simpler fare, fewer dishes and fewer meals.

The questions as to the action of excess of uric acid and its allies in the body in the causation of disease and to what extent such excess is due to flesh-eating are, I am aware, still under discussion by many members of the profession. But that both are productive of disease is the general opinion is shown by the almost universal consensus in the dietetic treatment of gouty and rheumatic affections—i.e., the withholding or reduction of flesh foods during their incidence. I believe that a very large percentage of diseased conditions is due to this excess and to the habits of gluttony fostered by the stimulating effects of a flesh diet.

The number of those who refuse to recognise the necessity of such a diet, and the resultant infliction on their subhuman fellows of the miseries of forced feeding, long transit by land and sea, and the all-too-frequent barbarities of the slaughter-house, is happily rapidly increasing, and it is becoming necessary for the medical attendant to be able to speak from a practical standpoint on the diet question; this position he can only attain by experience, for no one should presume to dogmatise respecting it till he has made trial of a non-carnivorous diet (intelligently arranged as regards food contents) for at least six months. I venture to prophesy that such an experience will result in nothing less than a complete transformation in the present opinions of the vast majority of the experimenters.

I am, Sirs, yours faithfully,

ROBT. H. PERKS, M.D. Brux., F.R.C.S. Eng.

Paignton, July 7th, 1902.

THE MEDICAL SERVICE OF THE MERCANTILE MARINE.

To the Editors of THE LANCET.

SIRS,—As a quondam ship's surgeon permit me to give my experiences. Financially, £10 a month was the maximum, £5 the minimum, this not including fees for severe cases calling for extra time and attention. I certainly think that no medical man should go to sea for nothing, as many do. If every man insisted on a wage for work it would be given, but this would necessitate the formation of a league, which, seeing that ship's surgeoncies are but temporary, would be difficult of formation. Socially the life is delightful, infinite the variety of type and character. If you happen on a ship where the skipper, mates, and engineers work well together—a happy family indeed—all's well with you and the passengers. Stick to that ship. But if you join where the deck and engine-room are at feud, woe betide. A stroll with the skipper upsets the chief engineer and a smoke in the chief's cabin lights fires of indignation in the captain. None but a diplomat can be happy for long on such a boat. The souls of shellbacks are sensitive if their stomachs are tough. Educationally, it is beyond price for a man just leaving hospital.

On one line I was in sole medical charge of close on a thousand emigrants. I, who had never vaccinated, had to vaccinate by the hundred; never having given an anæsthetic I chloroformed and performed minor operations at the same time; not having seen fever rashes I had them to diagnose, and it was a nice point, indeed, to differentiate vaccinia, varicella, variola, and varioloid. Then, again, a breech presentation with uterine inertia in a gale of wind, with a big beam sea, afforded considerable physical as well as mental exertion. On ships going East skin eruptions on Chinese coolies are extraordinary and amazing and the vagaries of malaria are still more so to the inexperienced. On one ship I sat officially at the head of a table with a bishop and his daughter on my right hand and a couple of American low comedians, fond of cognac in their coffee, on my left. This, too, was instructive. Another point of view educationally is of importance—viz., the art of playing poker. At first your month's pay and more—much more—vanish, but at the year's end, *experientia docet*, as it does in most things.

A life at sea for a year or two is good for a man. On some ships there is little or no work, on others a great deal too much, but he leads the life of a gentleman if he is one, lives well, sees the world, is not bound by service rigidities, and his horizon is considerably broadened. The "great green mother" brings forth memories pleasant in after life. "Abject" is an asinine adjective (what the user thereof is must be left to logic) to apply to "steamship doctors," unless, of course, they suffer from sea-sickness when it is æsthetically appropriate. "*Cœlum, non animum, mutant, qui trans mare currunt.*"

I am, Sirs, yours faithfully,

J. E. S. BARNETT, F.R.C.S. Eng.

Kingston-on-Thames, July 14th, 1902.

HORSE-DUNG IN LONDON STREETS.

To the Editors of THE LANCET.

SIRS,—That the horse is a nuisance in the streets is beyond doubt, but how great a nuisance has not yet been shown. On several occasions I have noticed that the deposit of manure from London stables on fields in the open country has been followed by outbreaks of diphtheria in the scattered cottages near by. Town medical men attribute summer sore-throats to the dryness of the wood pavements which are constantly fouled with horse droppings, and I would suggest to those occupied in bacterial research the advisability of an inquiry into the possibility of the propagation of diphtheria through infected discharges from an animal immune to the disease by inoculation.

I am, Sirs, yours faithfully,

H. BEALE COLLINS.

Health Department, Kingston-upon-Thames, July 19th, 1902.

To the Editors of THE LANCET.

SIRS,—Your suggestion that "some form of light scavenger, motor-propelled" might be employed to remove speedily horse-dung from London streets, seems to me much more practically useful than that of Dr. F. E. Fremantle who advocates the total suppression of horses and the general introduction of motor cars. "The horse," says the latter, "is no longer a necessity; to its owner he is a luxury, and to the public he is a nuisance." It is obvious to any schoolboy that four-fifths of London horses are not luxuries to their owners, and as compared with the nuisance of motor cars, as at present constructed and run, horses are positive comforts. Where motor cars, as in Paris and the Riviera, are much driven the public regard them as pests, which scare them, smother them with dust, and tax all their resources of nerve and muscle, to avoid. They are, withal, very ugly (especially their occupants), noisy, and unhealthy. Till motor cars supplant horses something more radical and resourceful than the present system of merely watering the gutters wants doing in London streets. Might not the pathways sometimes be swept and cleansed in dry weather, and might not successors be found for the smart little street boys whose disappearance with their dust-pans is so much missed? On returning to London from abroad one is always struck by the excellent paving of the London roads, and the way in which their hygienic merits are neutralised by the straw-laden atmosphere, due to the constant circulation of desiccated and neglected horse droppings. Now that you have called attention to this defect it is to be hoped that something may shortly be done to remedy it.

I am, Sirs, yours faithfully,

Ashley-gardens, S.W., July 21st, 1902. D. W. SAMWAYS.

THE TREATMENT OF INTRA-PERITONEAL ABSCESS OF THE APPENDIX.

To the Editors of THE LANCET.

SIRS,—One important point raised by Mr. F. C. Wallis's paper on the above subject in THE LANCET of July 19th, p. 145, touches the use of natural sponges in abdominal surgery. Mr. Wallis says marine sponges should not be used, and recommends Gamgee tissue, both for the purpose of protecting the sound peritoneum and for cleansing the abscess cavity. It is only the importance of small matters in practical surgery that makes me desire to record my conviction that for abdominal work well-chosen marine sponges *when properly prepared* are better from every point of view than any artificial sponge. They leave no fibres or fragments behind—a drawback that every substitute made of gauze and cotton-wool is bound to have. Such fibres or fragments are foci for re-infection in cases where pus is present. Marine sponges when moist with sterile salt solution absorb liquids more readily than "absorbent" wool and they are less harsh and less likely to injure the delicate endothelial covering of the peritoneum than are any swabs covered with gauze. The only real drawback to the use of marine sponges that I know is the trouble which they give in preparation—a process which the surgeon should be personally responsible for.

I am, Sirs, yours faithfully,

Portland-place, W., July 19th, 1902. J. JACKSON CLARKE.

DIPHTHERIA AND ITS TREATMENT AT COLCHESTER.

To the Editors of THE LANCET.

SIRS,—It seems barely possible to imagine that the letter of Dr. George Brown in THE LANCET of July 19th, 1902, p. 182, is intended to be taken seriously, and yet if it be intended as a satire on those who still refuse to believe that bacteriological examination and antitoxin are of any use in diphtheria the satire is too delicate for my perception. There is scarcely a statement in it which even borders on correctness. "Remove the cause and the effect ceases." Yes, remove the diphtheria bacilli from the throat and of course there will be no subsequent paralysis, provided they are removed *before they have got there*. In no instance is it probably less correct to apply this maxim. It would be as reasonable to say "remove the cannon-ball and the house it has knocked down will re-erect itself."

Dr. Brown's account of the morphology of the epithelium of the naso-pharynx is ridiculously at variance with facts, and his knowledge of the functions and distribution of ciliated epithelium and of its physiology in general must be derived from an unpublished work of his own, for certainly it is shared by no one else.

I have always thought that the finding of a specific for a disease, a remedy which could be relied on to cure, was the highest development of either medicine or surgery. Dr. Brown evidently prefers to have several strings to his bow. It might have been thought that the discovery of a remedy which would cure every one of 375 cases of diphtheria treated with it on the first day had some claims to be considered an advance in medicine. Dr. Brown has come to judgment, and we who believe in and advocate the use of antitoxin and are foolish enough to think that there is good in it must hide our diminished heads.

If I transgress the courtesies of debate I am sorry, but every letter like that of Dr. Brown means the encouragement of others of the same way of thinking, of whom the number is still lamentably large. The statements about "tetanus, severe urticaria, and other serious maladies" are the kind of thing which one might expect to meet with in the columns of the *Anti-vaccinator*, but scarcely from a medical man of good standing discussing a scientific subject in a fitting spirit. Will Dr. Brown be good enough to mention a few, say half a dozen, of the "other serious maladies?" That tetanus has followed when tetanus bacilli were contained in the serum is unfortunately true, but it is no more fair to charge antitoxin with the result than it would be to attribute

to sugar the death of a person who had accidentally taken sugar which was mixed with oxalic acid. Jenner's great law "that the protective principle must be introduced into the system before the disease it is used for breaks out" is no law at all and it would be interesting to know whence Dr. Brown obtained it. Possibly from another of his own unpublished works. In any case, the attempt to draw a parallel between scabies and diphtheria does not tend to inspire confidence in the deductions in general of the writer.

I am, Sirs, yours faithfully.

Old Kent-road, S.E., July 23rd, 1902. EDWARD C. BOUSFIELD.

To the Editors of THE LANCET.

SIRS,—Dr. G. Brown's letter in THE LANCET of July 19th expresses the reliance to be placed on bacteriological diagnosis and treatment by antitoxin as premature, and for my part I believe he is right and I think that this view is shared by many practitioners in the borough. What can be said of the following experience? Three of a family one after the other were attacked with sore-throat and exhibiting all the signs of diphtheria. The medical officer of health was notified who subsequently took swabs from two of the family. Afterwards he declared the results were negative. Within the past four months I took swabs from four cases, all showing clinical signs of diphtheria, and in each case the medical officer of health of Colchester, who took charge of the swabs, returned the report marked "No result."

With regard to treatment by antitoxin, I have examined three cases of children who were subjected to the remedy a few months previously. At the time of examination I found two suffering from albuminuria and one from albuminuria and bronchitis, from which latter it died. It may be said that these diseases will exist no matter what is done. Well, that is so, but it is peculiar that a remedy such as antitoxin, praised as infallible, should leave a grave sequel such as the above. In the town of Colchester two medical men almost went mad over the treatment on public platforms and by long letters in the lay press condemned all but antitoxin, which latter was, in their opinion, specific. It is grave to think that men of long experience in epidemic disease and who love their profession should not be permitted to have an opinion other than that manufactured for them. Antitoxin may be good; but is it possible that other treatment might also be good?

I am, Sirs, yours faithfully,

Colchester, July 23rd, 1902. H. WHITBY.

*** Dr. Brown's attitude towards the antitoxin treatment of diphtheria having been commented upon in our columns we considered it right to allow him to state his views. A similar desire to hear both sides induces us to publish Mr. Whitby's letter. We have already declared, in connexion with Dr. Brown's position, that it is impossible for us or anyone to lay down that a certain therapeutical proceeding is the one and only proper course to be pursued in any disease. But Dr. Brown called the use of antitoxin in diphtheria "bowing the knee to medicinal Baal," which was an unfortunate attitude for a medical officer of health to assume towards the treatment which happens to be accepted by practically the whole medical world as valuable.—ED. L.

PATENT FOODS.

To the Editors of THE LANCET.

SIRS,—In the lecture delivered by Dr. Robert Hutchison, and reported in your issue of July 5th, p. 1, I note that with regard to Mellin's food, the lecturer is reported to have said: "Mellin's may be used, but it is extremely poor in fat." A moment's reflection and doubtless Dr. Hutchison would have added: "Which is supplied by the milk or cream with which the food is directed to be made."

I am, Sirs, yours faithfully,

WALTER SCOTT, M.R.C.S. Eng., L.R.C.P. Edin., &c.

Tulse-hill, S.W., July 16th, 1902.

CIDER AND GOUT.

To the Editors of THE LANCET.

SIRS,—There is a letter on the above by Dr. T. Dobson in THE LANCET of July 19th, p. 182, in connexion with which I may say that many years ago, whilst living in Somersetshire, one of our cider counties, I made some investigations on this subject, the results of which were published by Dr. (now Sir) Alfred Baring Garrod in the second edition of his "Gout and Rheumatic Gout," p. 592 (Walton and Maberly, London, 1863), and which may be summed up as follows. *Sound* cider—i.e., cider of low specific gravity—completely fermented and containing neither acid nor sugar, is equivalent to a sound and *dry* wine and may be taken by the gouty with benefit, whereas, on the contrary, *sweet* cider, like imperfectly fermented beers, ales, and wines, is hostile to those disposed to gout on the principle that when *sugar* and *alcohol* meet in the stomach they become mischievous.

This subject I referred to again more fully in an unsigned article I wrote for Dr. Robert Druitt which he published in the *Medical Times and Gazette* of April 27th, 1867, under the heading "Cider for India."

I am, Sirs, yours faithfully,

July 22nd, 1902. ALFRED HAVILAND.

MALARIA (?) IN THE LOWER ANIMALS.

To the Editors of THE LANCET.

SIRS,—When in London I always endeavour to spend an hour or so in that delightful and creditable national institution—the Natural History Museum. Last week I had the privilege of visiting it and of seeing for the first time that most beautiful case containing the biology of the mosquito, the modelling of which is so inimitably done by a lady. On the descriptive letterpress attached I read, "Malaria is a disease peculiar to man," and my object in writing to you is to ask, is this an established fact? Because, when up in an arid, shaly, treeless district of Afghanistan we had over 100 cases of virulent malaria which I recommended to be moved down to shade and grass for milch cows. Our excellent commissariat officer, who, like General French, not only "never made difficulties," but would never *see* any, and who got me the cows from Heaven knows where, asked me to see his favourite down-country pony which had regular rigors followed by profuse sweating. I concluded, rightly or wrongly, that it had this severe malaria, and I proceeded to give large quantities of quinine in rum and frequent gruel; and although it resisted these at first, it soon whinnied when it heard my step and, unable to stand, held up its head, and sucked down its "bottle" and completely recovered. Now was not this really malaria? It had all the symptoms of it and quinine undoubtedly cured it. I may add that in that "sick camp" I had many interesting experiences as to the value of local herbs in endemic diseases.

I am, Sirs, yours faithfully,

July 21st, 1902. W. M. H.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Plague Epidemic.—The Monsoon.—Cholera and Plague Inoculations.

THE plague epidemic has sunk to almost insignificant interest. During the last fortnight the mortality has declined with rapidity, but we have apparently reached, if not passed, low-water mark, because there has been a slight rise again almost everywhere. For the week ending June 28th 1684 deaths were returned as due to plague, as compared with 1294 for the previous week and with 821 for the corresponding week last year. The Bombay Presidency had 554 deaths, as against 279; the Punjab 1026, as against 721; Karachi 12, as against 19; Madras Presidency 32, as against 22; Bengal 57, as against 27; the United Provinces 33, as against 39; and Mysore 170, as against 139. This slight and general rise is coincident with the commencement of the rainy season but is not necessarily to be attributed to it. I may remark once more that plague outbreaks seem quite independent of season (rain, sunshine, cold, or heat), of altitude, or of climatic conditions generally.

The monsoon, which it was at first thought would be at least an average one, has largely failed and the prospects are now most unfavourable, especially for Western India.

Inoculation for cholera, like that for plague, has lamentably fallen off, not from any decline in its value, but apparently from the indifference of authorities and because it is left optional to the labourers as to whether they will avail

themselves of it. In the few instances in which it was practised last year the results were satisfactory. The same with plague. While by personal influence in Gaya over 20,000 inoculations were performed the number done in Calcutta could almost be counted on the fingers. The results in Gaya proved very satisfactory. The mortality from plague is found to vary in the rural and urban areas. In Bengal during 1901 there were 90,762 cases recorded with 78,629 deaths, which compared with the previous year shows a decline of case mortality from 95·7 to 86·6, but at the same time in Calcutta the rate of mortality was 91·5 against 86·1 in the interior. There is no satisfactory explanation of this given. In the Sanitary Commissioner's report the editor rightly argues in favour of inoculation as against disinfection, but the Lieutenant-Governor is unable to accept his arguments. There is very little evidence to show that disinfection as practised is of any value, while the results of inoculation are unmistakeable. The principle of vaccination against small-pox is to render the people immune to this disease, and so it is with inoculations for plague, but the authorities can hardly be said to encourage it.

July 4th.

FEES TO MEDICAL WITNESSES.

(FROM A LEGAL CORRESPONDENT.)

So much has been said and written with regard to the payment of medical practitioners for their services as witnesses that a concise statement of the existing law upon the subject may be found useful. Increase in population and the increased popularity of the medical profession have made serious inroads upon the time at the disposal of the practitioner, but even this has not had the effect of inducing those who have the power to bring about the payment of a "living wage" to the medical man who is compelled to spend his valuable time at a court of justice. A bare statement of the law with regard to the duty of a witness who is subpœnaed to attend the hearing of a case at any court ought to be sufficient to show that adequate compensation should be given to any professional man who is called upon to fulfil such a duty. Lawyers, of course, like other people, suffer from the law's delays, but they take good care to obtain additional fees for the waste of time which is occasioned by attendance at court. Moreover, when we bear in mind the importance of the issues which sometimes depend upon the opinion of a medical witness it is surprising that remuneration should be based upon the present parsimonious basis.

The following is a list of the "places" in which the services of medical men are sometimes required: (1) Parliamentary Committees; (2) the High Court of Justice (in all its various departments); (3) assizes; (4) courts of quarter sessions; (5) police courts; and (6) coroners' inquests. The following figures, which are for the most part taken from Glenn's "Manual of the Law affecting Medical Men" (1871!), give the *existing* scale of expenses which are allowed to medical men on taxation. In the House of Lords the taxing-master is bound by the following scale:—

—	Time.	Per diem (hotel expenses if from home).
	£ s. d.	£ s. d.
Apothecaries, chemists, and druggists	1 1 0	1 1 0
Physicians and surgeons	2 2 0	1 1 0

Higher charges are under special circumstances sometimes allowed. Sundays do not count as time. For travelling expenses the sum necessarily expended is allowed. Although the attendance of medical men is but rarely required at the House of Lords except in cases where money is no object, the scale of fees above set out is very much too low, especially in view of the high fees usually allowed to persons having business in the Upper House. The proviso that "Sundays do not count as time" is ungenerous in the extreme, for a country practitioner might well make a claim in respect of his absence from his practice on Sunday.

The following are the fees allowed on taxation in the various branches of the High Court of Justice:—

In the King's Bench Division and Chancery Division.

Per diem, if resident in the town where the case is tried (i.e., in one circuit town or assizes, or London, when the case is tried at the Royal Courts) £1 1 0
Per diem, if resident at a distance from the place of trial, inclusive of all except travelling expenses. [If the witness attends more than one cause, he is entitled to only a proportionate part in each case] ... £2 2 0 to £3 3 0

In the Probate Court.

Per diem, if resident within five miles of the General Post Office £1 1 0
Per diem, if resident beyond that distance (including board and lodging) £3 3 0

In the Divorce Court.

Per diem, if resident within five miles of the General Post Office £1 1 0
Per diem, if resident beyond that distance (including board and lodging) ... ... £2 2 0 to £3 3 0

In the Admiralty Court.

Per diem, whether required to come a distance not exceeding five miles or not (including board and lodging) ... ... £1 1 0 to £3 3 0

In each of the above cases the amount reasonably and actually expended for travelling expenses is allowed, provided that it does not exceed the sum of 1*s.* per mile one way. In the bankruptcy court, which forms part of the high court of justice, the following scale is used:—

Per diem, if resident in the town in which the court is held £1 1 0
Per diem, if resident at a distance from the court, including subsistence ... ... £1 1 0 to £3 3 0

In this case travelling expenses are allowed at the rate of 7*d.* per mile one way where there is no railway available, or travelling expenses actually incurred, in the discretion of the taxing officer.

The above figures were true in 1870 and, subject to certain unimportant modifications consequent upon the fusion of some of the divisions of the High Court to which they relate, they are in force at the present time. In any case there has been no substantial alteration. They appear to have been drawn up for the convenience of professional men who can make a protracted visit to London by the simple expedient of altering a list of engagements; they are certainly not intended to compensate a medical practitioner who must be at the beck and call of his patients at all hours of the day and night.

In the county courts, where medical men are sometimes subpœnaed to render assistance to one or other of the parties the following scale is used:—

Medical men as ordinary witnesses (per diem)... £0 15 0 to £1 1 0

Medical men as expert and scientific witnesses.	If costs taxed on ordinary scale.	If costs taxed on the higher scale.
	£ s. d. £ s. d.	£ s. d. £ s. d.
For qualifying to give evidence	1 1 0 to 3 3 0	1 1 0 to 5 5 0
Attending court on trial (per diem)	1 1 0 to 2 2 0	1 1 0 to 3 3 0

All the above figures are intended to be used as a guide to the amounts which may be allowed by taxing masters when settling the bill of costs to be paid by the unsuccessful party to a suit. There is nothing to prevent a medical practitioner entering into an agreement under which he may claim greater remuneration, but it has been decided that if a medical witness is compelled to bring a suit to recover for his services as a witness he can only recover the amount allowed by the rules. Further, the above figures may be used as a scale upon which an estimate may be drawn up if all payment is refused.

With regard to every claim for services rendered as a witness in a civil case it is sometimes said that a witness is entitled to refuse to give evidence unless his expenses are paid, and, further, that he is at liberty to claim conduct money when a subpœna is served upon him. But "conduct money" often amounts to a mere nominal payment; and a witness who refuses to be sworn until his fee is paid has but poor consolation for his trouble in going to the court. In a recent case in the Leeds County Court, before His Honour Judge Greenhow, which has given rise to much comment, the medical officer of a public charity in Leeds refused to be sworn to give evidence for the plaintiff

unless his fee of £1 1s. was paid. In the result he was not compelled to give evidence, but he was, nevertheless, put to the trouble of attending the court and his conduct was made the subject of severe and, it is submitted, wholly unwarranted criticism on the part of the learned judge.

The consequences of disregarding a subpœna to attend to give evidence are severe both in the High Courtand in the county courts. A witness who disobeys a subpœna issued out of the High Court after having had his expenses paid or tendered may be committed for contempt, although he cannot be proceeded against for making default unless it appears that a reasonable and sufficient sum of money to defray the expense of coming and going was tendered to him. He is also liable under an old statute passed in the reign of Queen Elizabeth to an action at the hands of the party who suffers damage by reason of the evidence not having been forthcoming. To the rule that conduct money must have been tendered before the court can make an order upon a motion to commit a witness for contempt, there used to be an exception in a case where the witness lived in the town where the court is held, but it is not certain that this exception would hold good at the present day.

It is provided by the County Courts Act (Section III.) that any person summoned to attend as a witness, to whom at the same time payment or a tender of payment of his expenses shall have been made on the prescribed scale of allowances, who refuses or neglects to appear, or who shall refuse to be sworn or to give evidence, shall forfeit and pay such fine, not exceeding £10, as the judge shall direct.

The foregoing statement of the law will have made it plain that the existing scale of fees is capable of rigid enforcement, and the treatment which one practitioner received at the hands of the county court judge is not likely to tempt others to stand on their strict legal rights.

Turning to the courts of criminal and *quasi*-criminal jurisdiction we find the position of the medical practitioner very little better. Except in certain special cases an offer of expenses is not necessary in order to secure the attendance of a witness in a criminal trial. This is upon the ground that attendance at such a tribunal is a public duty. It is, however, provided by the 45 Geo. III., cap. 92, section III., that where a witness is called upon to give evidence in another part of the kingdom and is served with a subpœna for the purpose a sufficient sum to defray his expenses must be tendered at the time. In pursuance of this principle the Home Secretary (by virtue of the 14 and 15 Vict., cap. 55) has ordered that medical men shall be remunerated in criminal cases in assizes, &c., upon the following scale: "To prosecutors and witnesses being members of the profession ..... of medicine attending to give professional evidence for their trouble, expenses, and loss of time, for each day they shall necessarily attend the court to give professional evidence a sum not to exceed £1 1s. For each night, if detained all night, 2s.; and if they shall attend from a distance, for mileage, per mile each way, 3d."

Under the Indictable Offences Act, 1848, power is given to justices to require any person to appear to give evidence, if it shall appear to the justices that the evidence of the witness is material. If he refuses to appear without a just excuse, then, after proof of the service of the summons, the justice may issue a warrant in order to bring him before the court. It seems that in such a case a tender of expenses is not absolutely necessary, but in 1893 Lord Brampton (then Sir Henry Hawkins) expressed the opinion that solicitors have no right to bring a person a long way without providing travelling expenses; and it is enacted by the Summary Jurisdiction Act, 1848, that *upon proof*, but only upon proof, of expenses having been tendered the justices may order a defaulting witness to be brought up on a warrant.

If a medical witness is practically at the mercy of the litigants in a civil case he is at the mercy of the Crown when summoned to a criminal court. It may be said that it is part of the duty imposed by statute upon a medical man that he shall give his services to promote the ends of justice, but it is difficult to understand why services so rendered should not be adequately compensated. All who have attended assizes and quarter sessions know how medical men are kept in attendance for days until cases in which they have been bound over to appear come on for hearing.

Even in the coroner's court, where the presence of one or more medical witnesses is practically essential, the scale of fees allowed is absurdly low. It is provided by the Coroners Act, 1887, that a medical practitioner may claim: "(*a*) for attending to give evidence at any inquest whereat no post-mortem examination has been made by such practitioner, one guinea; and (*b*) for making a post-mortem examination of the body of the deceased, with or without an analysis of the contents of the stomach or intestines, and for attending to give evidence thereon, two guineas." This rule is subject to the proviso that if an inquest is held on the body of a person who had died in (*inter alia*) a public hospital or "other medical institution" ..... the medical officer whose duty it may have been to attend the deceased is not to be entitled to any fee. The scope of this proviso may be gathered from the case of Horner *v.* Lewis (67 L.J. 524), in which it was decided in 1898 that a cottage hospital comes within the meaning of the phrase "other medical institution" as used in the section, with the result that the honorary surgeon of such a hospital can obtain no fee from the coroner.

It is apprehended that after reading the foregoing statement of the existing law with regard to the remuneration of medical witnesses an impartial critic would be forced to the conclusion that members of the medical profession are grossly underpaid for the important services which they are compelled to render to the public.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Convalescent Institution.

AT the annual meeting of the Liverpool Convalescent Institution at Woolton, the secretary drew the attention of the subscribers to the satisfactory progress made in the work of the institution as evidenced by the increase in the number of patients during the last year, the total amounting to 2672—the highest number attained. The financial position of the institution might be considered to be satisfactory. The gross receipts from all sources showed the slight falling off of £68, but this was more than counterbalanced by the decrease in payments for special purposes, maintenance, and extension, which were heavy during the previous three years. There was a credit-balance at the bank of £129. The subscription list again showed an augmented total, a very healthy feature, and indicative of increasing popularity and appreciation. The annual subscription list had increased from £679 in 1891 to £1001 in 1901. Mr. J. W. Hughes had enabled the committee to raise the number of free beds to 14 by a generous donation of £21 a year. The subscribers made a liberal use of the nomination and recommendation forms which were supplied to them, the former admitting patients free of charge and the latter at the reduced rate of 5s. per week. The amount received from patients for extension of time—£1667—testified strongly to their appreciation of the benefits resulting from the change of air and scene. The Lord Mayor of Liverpool alluded to the advantages and usefulness of such an institution where patients who were convalescent might go to be restored to health and strength.

Proposed County Sanatorium for Cheshire.

Deputations from the various town councils, boards of guardians, district councils, and sanitary authorities over the whole of Cheshire met the health committee of the Cheshire County Council at the North-Western hotel at Crewe last week to discuss the necessity of providing a sanatorium or sanatoriums for the treatment of patients suffering from tuberculosis resident in the county. Mr. D. B. Hewitt of Northwich, who presided, dealt with the proposal at length and said that the total number of deaths caused by that disease in Cheshire during the four years amounted in 1897 to 638, in 1898 to 683, in 1899 to 646, and in 1900 to 598. It was proposed and seconded:

That a sanatorium or sanatoria should be established in the county for the treatment of consumption.

Mr. W. Hodgson, L.R.C.P. Irel., county councillor, said that this question had been before the county for a considerable time, and it was absolutely necessary that something should be done. But if they did not adopt compulsory notification they could not have a sanatorium. The motion, amended so as not to commit the authorities absolutely to the votes of the representatives, was then carried.

The Special Appeal on behalf of the Stanley Hospital.

The serious condition of the finances of the Stanley Hospital was alluded to in THE LANCET of July 12th, p. 114;

the appeal by the committee to the citizens of Liverpool for funds to enable them to keep the hospital open, has resulted in promises of subscriptions of £1805 to date. The charity is in debt to the amount of £5000.

Hospital for Women, Shaw-street.

The honorary treasurer of the Hospital for Women gratefully acknowledges a donation of £500 from Sir William Tate, Bart., to the general funds of the hospital. This generous gift has proved most opportune and will enable the committee to have both the interior and the exterior of the buildings painted and put into thorough repair, a much-needed improvement which could not be done earlier owing to lack of funds.

The Liverpool Royal Infirmary.

Dr. Richard Caton, the senior physician to the Royal Infirmary, will shortly retire through lapse of time. Dr. Caton was appointed honorary physician in 1886, having previously been honorary physician to the Northern Hospital.

West Derby Board of Guardians and Sane Epileptics.

At the last meeting of the West Derby board of guardians Mr. I. Holmes, L.R.C.P. & S. Edin. (vice-chairman of the board) reported that he had attended, on behalf of the board, the conference at Manchester of the representatives of the Lancashire unions convened for the purpose of considering the best means of providing accommodation for sane epileptics. The Manchester and Chorlton unions did not take any part in the conference. It was decided to form a colony and to erect buildings, but the difficulty arose as to ways and means and how they were to carry out such a scheme. A small sub-committee was appointed to inquire into these matters and to see what each union in the county was prepared to do. He had come to the conclusion that it was time that the West Derby Union withdrew from the scheme, which would practically mean, with the cost of land and buildings, an expenditure of £80,000, and each union belonging to the combination would be expected to pay *pro rata*. It was stated that outside Manchester and Chorlton there were about 350 sane epileptics in Lancashire. It was proposed that the Government should buy the land and erect the buildings, but a Local Government Board inspector expressed the opinion that such an undertaking would not take place in the life-time of the present generation. In the West Derby Union they had accommodation at Elm House for at least 80 epileptics, and although many were insane they were not all unmanageable and they did not interfere with the sane patients. This accommodation, which was practically sufficient for a quarter of the sane epileptics in Lancashire, would meet their requirements for many years to come, and he would urge them not to take part in the scheme although he was quite in sympathy with its objects. The board agreed with Mr. Holmes's views and resolved to withdraw from any further action in the matter.

Cancer in Cheshire.

Mr. Francis Vacher, the medical officer of health of Cheshire, in his recently published annual report draws attention to the large number of deaths occurring annually in Cheshire as the result of cancer. In 1901 there were 538 deaths caused by this disease, as against 439 in the previous year. Any contribution to the better understanding of so terrible a disease, he says, should be welcomed, and most medical officers of health could contribute some facts and observations. There are many points as regards cancer which require elucidation:—"Is cancer a parasitic disease? Is it infective? Does it haunt houses and places? Is it communicated by domestic animals? Is it associated with the ingestion of any food, animal or vegetable? Is the disease increasing?"

July 22nd.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

The Prevention of Tuberculosis.

WHEN the South Wales and Monmouthshire branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis was formed in October, 1901, the executive committee was empowered to promote the establishment upon a partially self-supporting basis of open-air sanatoriums for patients suffering from tuberculosis, and at a meeting of the committee held at Cardiff on July 11th a report dealing with the subject was adopted. It is suggested by the committee that in the first instance a sanatorium to accommodate 20 patients shall be erected for Glamorganshire and Monmouthshire. The initial cost is estimated at £5000 and the cost of maintenance at £80 per patient, or £1600 annually. It is proposed that the £5000 shall be obtained by voluntary contributions but that the annual sum of £1600 shall be provided by the two county councils, the county boroughs of Cardiff, Swansea, and Newport, and the 53 urban and rural sanitary authorities in the two counties. The committee instanced the action of the Westmorland county council which contributes £110 yearly towards the maintenance of the county sanatorium, where there is accommodation for 22 patients, although the population of the county is only 64,000 and the rateable value only £436,000. The chairman of the Monmouthshire county council moved the adoption of the committee's report, which was not, however, allowed to pass unchallenged. Dr. J. C. Bowie of Cardiff contended that the sanitary authorities could spend the ratepayers' money to better purposes by improving the conditions under which so many persons were compelled to live, and he expressed some doubt as to the ultimate good which accrued from treatment in a sanatorium. In connexion with the notification of phthisis it is of interest to quote the experience of the medical officer of health to the Llandaff and Dinas Powis rural district (Dr. R. Prichard). In August, 1901, the district council, on the recommendation of Dr. Prichard, invited the medical practitioners in the district to notify cases of consumption occurring in their practices and offered a fee of half-a-crown for each certificate. Up to the end of the year only one certificate was received and that was after the death of the patient. During the whole year there were 25 deaths from phthisis, so that the absence of certificates cannot have been due to the absence of cases to certify.

Carmarthen Asylum.

The joint counties asylum at Carmarthen serves a population of 283,000 persons living in Carmarthenshire, Cardiganshire, and Pembrokeshire. It was established in 1865 and has accommodation for 576 patients. The medical superintendent (Dr. Edwin Goodall) in his annual report comments upon the prevalence of tuberculous disease in the asylum, 40 per cent. of the total deaths being attributed to this cause notwithstanding the fact that the open-air treatment has been followed in suitable cases and with encouraging results. Dr. W. H. Symons of Bath has shown[1] that Cardiganshire has the highest death-rate from tuberculous diseases of any county in England and Wales, averaging in the decennium 1891–1900 2·4 per 1000 compared with 1·4 for the whole of England, and 1·7 for Wales. Dr. Goodall advises the erection of a separate block for private patients, and there ought not to be any difficulty in giving effect to this proposal, for during the past seven years there has been credited to the building fund of the asylum a sum of £7367, which represents the profit made upon private patients and upon patients received from other counties. The average weekly cost per patient is under 10*s*.

Pontypool Hospital.

Pontypool is a town with a population of about 6000 persons and is the centre of a large and increasing colliery district. Although it is only about 10 miles from Newport the want of a properly equipped hospital has long been felt and definite steps have now been taken to erect a building with accommodation for 19 patients at a cost of £6300. Two of the beds will be set apart for persons suffering from hernia in fulfilment of an agreement made with the trustees of the late Mr. Richard Coslett, who died in the year 1895 and, in addition to other charitable bequests, left £1000 and an annuity of £100 for the establishment and endowment of a hospital at Pontypool for the treatment of poor persons suffering from hernia. As it was found impracticable to carry out fully the intentions of Mr. Coslett in this direction Mr. Justice Joyce on July 18th gave permission for the sums named to be applied to the erection and support of the general hospital about to be established. The colliers in the district have been for many months past subscribing a penny a week each towards the hospital fund and the employers are adding 25 per cent. to the workmen's contributions.

[1] Public Health, vol. xiv., p. 357.

Small-pox.

During the week ending July 19th eight fresh cases of small-pox were notified in Swansea and eight deaths occurred in the small-pox hospital during the same period. No cases were reported during the last three days of the week. Of the 140 patients who have been attacked since the beginning of the outbreak not one had been recently revaccinated. The Swansea board of guardians is taking very comprehensive steps to ensure the revaccination of as many of the inhabitants of the town as possible and every assistance is being rendered by the local medical practitioners. On July 15th a deputation from the Swansea Medical Society conferred with the board, when it was arranged that the town should be divided into 20 districts and that a house-to-house visitation should be made for the purpose of offering and performing revacinnation. A fee of 2*s.* 6*d.* will be paid for each successful revaccination, the lymph being provided by the board of guardians, and the person vaccinated will be expected to present himself for subsequent examination at the surgery of the medical practitioner vaccinating. Where the operation takes place at a surgery the same fee will be paid but the board will not supply the lymph. Some members of the board of guardians appeared to think that a smaller fee might be accepted, but the president of the medical society (Mr. W. F. Brook) pointed out that house-to-house vaccination entailed a great deal of hard work, for it meant picking up the laggards, many of whom would require a considerable amount of persuasion before they would submit to the operation and frequently more than one visit would be necessary. The police have distributed 20,000 cards drawing the attention of householders to the necessity of revaccination and explaining the facilities offered. The sanitary committee of the corporation acquiesced in a suggestion of the medical officer of health (Mr. Ebenezer Davies) that the circulation of all books from the free library should be absolutely stopped from all houses unless there was a declaration from the head of the house to the effect that all members of the family over 10 years of age were revaccinated. The corporation, however, would not consent to this proposal being carried out. On July 17th Dr. Wilfred W. E. Fletcher visited Swansea on behalf of the Local Government Board.

Swansea General and Eye Hospital.

The annual report of the Swansea Hospital, unlike that of many similar institutions, contains a balance-sheet showing an expenditure which has been more than met by income. The total amount of the latter was £6151, and more than one third of this sum was received from periodical collections among workpeople. The expenditure for the year was £5457, the weekly cost per patient averaging £1 2*s.* 2*d.* The hospital contains 130 beds and during the year ending May 31st 1175 in-patients were treated, or 23 more than in the previous 12 months. Owing to the prevalence of small-pox in the town patients were not admitted from infected districts; the number of out-patients was therefore only 5457, or 654 less than in the year 1900-01.

Cardiff Health Report.

Dr. Edward Walford has just issued his annual report for the year 1901 and, like his reports of previous years, it is full of interesting matter. The birth-rate for the year was 31·4 per 1000; the average rate for the previous 10 years was 35·7. The death-rate was 16 per 1000 compared with an average rate for the previous 10 years of 18·5 per 1000, and the rate of infantile mortality was equal to 148 per 1000 births, or 13 below the average rate of the preceding decade. The death-rates in different parts of the borough varied from 11 per 1000 in Riverside ward to 17·3 in the central ward. When commenting upon the prevalence of scarlet fever in the town Dr. Walford expresses the opinion that although hospital isolation may never entirely remove scarlet fever from amongst us it will, if systematically enforced, have the effect of lessening the extent of an epidemic and of extending the interval between epidemic periods, thus reducing the sickness rate and the fatality of the disease by postponing the infection until a later age. Some important investigations have been made during the past two years with a view to ascertain to what extent overcrowding of dwellings existed in the borough. There were examined 5547 houses and in less than 1 per cent. was there an average of more than two occupants per room. There is evidently, therefore, very little overcrowding in Cardiff.

July 21st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Public Health of Dublin.

THE Council of the Dublin Sanitary Association met on July 17th at the offices of the association, 42, Daniel-street, and had under consideration the spread of the present epidemic of measles in the city and suburbs, when the following motion was passed unanimously:—

That the council of the Dublin Sanitary Association view with concern the following facts relative to the spread of the measles epidemic in Dublin at present. According to the weekly report of the Registrar-General for the week ended July 12th no fewer than 252 cases of this disease were notified in the city and 24 cases in Pembroke. No figures are available for Rathmines. The admissions to hospital of measles patients were only 45 during the week and at the close of the week but 163 cases in all were under hospital treatment. The council are of opinion that a special staff of district nurses should be employed during the stress of the epidemic to visit the children of the poor for whom the necessary hospital care is not available.

The managing committee of Cork-street Fever Hospital met on July 10th when the registrar reported that there had recently been a great demand on the hospital beds owing to the epidemic of measles, happily of a mild type. There has not been any new case of small-pox in Dublin and the institution at Finglas in which patients suffering from that disease were lodged is soon to be reopened for the isolation of convalescent cases of scarlet fever.

Royal Hospital for Incurables, Donnybrook, Dublin.

Owing to the generosity of Mr. William Fry, the chairman of the above institution, an entertainment was given to the poor patients there on July 17th. During its progress the following telegram was forwarded to His Majesty the King:—

His Majesty the King, Royal Yacht, Cowes.

206 patients in the Royal Hospital for Incurables assembled at an entertainment given by the chairman in honour of the Coronation, tender their most respectful and loyal congratulations to His Majesty the King, and desire to express their heartfelt thanks to Almighty God for His Majesty's continued progress towards recovery from his recent serious illness. WILLIAM FRY, Chairman.

Royal Hospital for Incurables, Dublin, 17th July, 1902.

The following reply was received:—

William Fry, Royal Hospital for Incurables, Dublin.

Am commanded to express His Majesty's thanks to the patients in the Royal Hospital for Incurables for their kind telegram.

KNOLLYS.

Richmond District Lunatic Asylum, Dublin.

The monthly meeting of the committee of management of the Richmond District Asylum was held on July 18th in the Board room, North Brunswick-street, when the resignation of Dr. D. F. Rambaut was received. Dr. Rambaut filled the office of resident medical officer and pathologist to the institution for some years and is now about to leave Dublin. Mr. Conolly Norman, the resident medical superintendent, spoke in very complimentary terms of the services of Dr. Rambaut, and the following motion, proposed by the chairman, was passed unanimously:—

That we desire to place on record our complete satisfaction with the manner in which Dr. Rambaut has discharged his duties whilst in the service of the institution, and, though we regret he is now leaving Dublin, we congratulate him upon his recent appointment to the charge of Shrewsbury Asylum.

The Small-pox Outbreak in Belfast.

At a meeting of the Belfast board of guardians held on July 15th it was reported that no new cases of small-pox had occurred since the last admission which took place three weeks before, so it may be said that the epidemic has been overcome. The number of cases—all convalescent—remaining in the union hospital is 12. Too much praise cannot be given to Dr. A. G. Robb, who had charge of the cases, and all the officials at the union workhouse for the great success which the efforts made by them have attained in the stamping out of this epidemic, especially as the patients were placed in a building adjacent to which there are over 5000 inhabitants in the workhouse.

North of Ireland Branch of the British Medical Association.

The annual meeting of the North of Ireland branch of the British Medical Association was held in the Belfast Museum on July 17th, the President, Dr. J. S. Darling (Lurgan), being in the chair. The minutes having been read and passed the annual report and financial statement were submitted and passed. From these it would appear that with the 13 new

members elected the membership of the North of Ireland branch is now 307, making the branch the largest medical association in Ireland, and there is a balance in hand of over £20. The following were elected office-bearers for the ensuing year:—President: Professor T. Sinclair. Vice-Presidents: Dr. W. D. Donnan (Holywood), and Dr. A. B. Mitchell (Belfast). Council: Country—Dr. J. C. Martin (Portrush), Mr. G. L. St. George (Lisburn), Dr. J. Stuart (Ballymena), Dr. D. Gaussen (Dunmurry), Dr. Darling (Lurgan), Dr. J. C. Hall (Monaghan), Dr. S. Agnew (Lurgan), and Mr. R. Gray (Armagh); City of Belfast—Sir W. Whitla, Dr. A. Dempsey, Dr. C. E. Shaw, Professor J. A. Lindsay, Dr. John Campbell, Dr. H. L. McKisack, Professor J. W. Byers, and Dr. T. S. Kirk. Representative of the branch on the Parliamentary Bills Committee: Dr. Dempsey. Representatives of the branch on the Central Council of the British Medical Association: Professor Byers and Dr. W. Calwell. Treasurer: Dr. G. Gray (Newcastle). Secretary: Dr. Calwell.—Dr. Shaw showed a case of Paralysis of Convergence.—Dr. V. G. L. Fielden read a short paper on Anæsthesia by Gas and Oxygen in General Surgery, which was criticised by Dr. Mitchell, Professor J. L. Smith, and Professor Byers.—Mr. H. N. Barnett read notes on Some Unusual Cases of Small-pox.—Dr. Dempsey read notes of two cases in which the uterine appendages were removed for Inoperable Cancer.—Mr. Kirk read notes of Obscure Abdominal Symptoms following Ruptured Kidney and he showed three Calculi removed from the urethra and a Vermiform Appendix removed on the day of the meeting.—Professor Byers gave an account with clinical details of an abdominal section for an unusual Tumour of the Ovary—a soft spindle-celled sarcoma. He also showed a Fibro-myoma of the Broad Ligament weighing 26 pounds, which apparently is the third largest tumour of this nature published, as having been successfully removed. Microscopic sections of both tumours, prepared by Dr. R. J. Johnstone, were exhibited.—Dr. Calwell showed (1) Convenient Forms for the Subcutaneous Administration of Sterile Gelatin and of Sterile Glucose Solution; (2) a specimen of Malignant Disease of the Stomach; and (3) Skiagrams of Pulmonary Tuberculosis. He also read notes of a case of Intermittent Glycosuria, the presence of sugar being induced by bouts of alcoholism.

Presentation to Dr. Daniel Murphy.

On July 19th, the senior students of the Cork North Charitable Infirmary assembled in the board-room for the purpose of making a presentation to the late house surgeon, Dr. Daniel Murphy, as a token of the high esteem in which he was held during the two years that he was connected with them. The presentation took the form of a midwifery bag with fittings complete. On the outside of the bag was an engraved plate bearing the inscription, "Presented to Daniel Murphy, M.B., by the senior students of the North Charitable Infirmary, July 12th, 1902." The students having assembled, Mr. D. D. Donovan, senior physician, was, on the proposition of Mr. C. Baylor, seconded by Mr. E. Walsh, unanimously voted to the chair. Mr. Donovan having thanked the students for the honour which they had done him in asking him to make this presentation, said that it was a pleasure to be asked to preside on the occasion.—Dr. Murphy, replying, said that he looked back with pleasure on the happy time he had spent in the North Infirmary and that he would always prize the gift which the senior students had so thoughtfully presented to him.—The proceedings terminated with a vote of thanks to Mr. Donovan, proposed by Dr. W. F. O'Connor (house surgeon) and seconded by Mr. Baylor. The students were afterwards entertained by Dr. Murphy.

July 22nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

New Suggestions for Meals in Hospitals.

M. CHAUFFARD recently laid before the Hospital Medical Society certain suggestions concerning the meals served to patients in the hospitals. Up to now *déjeuner* has been at 11 o'clock and dinner at 5 o'clock. M. Chauffard would not interfere with the former meal but wishes to put the dinner later. He also suggests that instead of all the patients eating in bed those who are able to be up should dine in a refectory separate from the wards. Those who have to be in bed should be provided with a little table to be placed on the bed. Meals, too, should be served hot and not be allowed to get cold as they are at present. M. Chauffard complains in addition about the soup meat (*bouilli*) and the soup (*bouillon*). Soup should only be made, he considers, from those portions of meat which are of no use for anything else. Desiccated vegetables served as a *purée* should be largely used and as many kinds of fresh vegetables as possible should be given, care being taken to see that they are of good quality. Another reform which he is anxious to see carried out is to give every patient a bottle full of fresh water. At present, if a patient wishes to get water to mix with his wine he has to get up and fetch it for himself from the tap.

The Medical Students' Union.

Five hundred medical students have just founded an association in defence of their interests, both moral and material. The association will not deal with any political questions. The first meeting was held on July 7th in the large theatre of the School of Medicine and the promoters of the movement read out the provisional regulations. The objects of the association were defined as follows: to find out and to put into practice the most useful methods for the moral development of the profession; to transmit to the proper authorities the decisions arrived at by medical students in their general meetings so long as these decisions have to do with scholastic or professional matters; to facilitate by every possible means professional instruction among the members; and to bring about the strongest possible bonds of union between medical men, professors, and medical students. These suggestions were unanimously approved. Other matters discussed were the admission of representatives of students in every Faculty to the University Council and admission without fee to practical studies. Another question which was much discussed was whether foreign students should be admitted to the association. At present the headquarters of the new association are in some buildings in the Boulevard St. Michel which the students of the School of Pharmacy have kindly placed at the disposal of their medical brethren.

The Lille Faculté Libre of Medicine.

An important judgment has just been given at Lille. The law states that "*facultés libres* of medicine cannot be founded unless they have at their disposal 120 beds in a hospital either founded by themselves or else placed at their disposal by the Assistance Publique." In 1875 the Catholic faculties of Lille made a convention with the Lille hospitals by which the latter, in consideration of the sum of 140,000 francs, handed over to the *Faculté Libre* of Medicine two blocks containing 200 beds, a theatre, and a post-mortem room. All these buildings were in the St. Eugénie Hospital which was then in course of building and they were handed over for an unlimited time. The Prefect approved the transaction but his approval was not endorsed by the Minister concerned. The State Council, however, declared that as the scheme had been entered upon the Minister had no power to annul the decision of the Prefect. Last year a majority of the members of the Hospital Committee came to the conclusion that they would demand the annulment of the agreement. Accordingly the Mayor of Lille, as President of the committee, haled the governing body of the Catholic faculties before the civil courts. Judgment has now been given and the Hospital Committee is non-suited.

The Self-sacrifice of Dr. Garnault.

On Tuesday, June 17th, a Paris physician, Dr. Garnault, inoculated himself with bovine tuberculosis with a view to test the correctness of Professor Koch's statement that bovine tuberculosis is not communicable to human beings. The experiment was undertaken in the abattoirs at Villette in the presence of three colleagues of Dr. Garnault. On the previous evening Dr. Garnault had blistered the anterior surface of his left forearm. On the Tuesday morning the epidermis was cut away from the blister and the raw surface was slightly scratched. A tuberculous gland was taken with aseptic precautions from a tuberculous cow and having been reduced to pulp in a mortar was applied to the raw surface by means of a pad and bandage. It was allowed to remain in contact for the space of two hours. The result of this experiment was that recently some small red papules appeared at the site of inoculation which are taken to be cutaneous tuberculides. No infection of glands has appeared and Dr. Garnault, who is anxious that such infection

should be manifested, determined not to await its development from the first inoculation but has proceeded to carry out another experiment. On July 15th he, in the laboratory of Dr. Barlerin, placed in the subcutaneous cellular tissue of his forearm a portion of a tuberculous nodule taken from the liver of a tuberculous cow which had that morning been killed in the abattoir. Microscopic examination of a portion of this nodule showed masses of the bacillus tuberculosis. The wound in the skin was sutured aseptically and Dr. Garnault hopes in a little time to be in a position to state whether Koch is right or wrong in affirming that bovine tuberculosis is non-transmissible to human beings.

July 22nd.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Automobile in the United States.

THE automobile has gained for itself a very bad name in America among the community at large. In New York the craze for automobiling has become an intolerable nuisance and also a source of grave public danger. Not a week passes but the papers contain an account of some fatality due to the automobile and generally, sad to relate, owing to the carelessness of the *chauffeur* or to the fact of the machine being driven at a very high rate of speed. The people of the United States are much given to boasting of the freedom of the country, but when this freedom takes the form of trampling upon the rights of other citizens it is hard to say where the advantage of it comes in. Freedom too often is allowed to degenerate into licence here, and in no country have private rights to be preserved by such incessant struggle as in the United States. The owners and drivers of automobiles have too long been allowed flagrantly to disregard the rules of the road, for although a few traversers of the law are arrested occasionally, the punishment meted out to them seldom or never is in proportion to their offence. The limit of speed should be rigidly fixed and offenders should be punished heavily for contravening this regulation. Again, such portentous evil-smelling machines as some of the large racing automobiles should not be allowed on city streets. Gaudy, noisy, and malodorous, they are a terror alike to pedestrian and horse and have greatly helped to render the already crowded and bustling streets of New York an abomination to the nervous citizen. Many automobilists have exhibited so cynical an indifference and so brutal a disregard for the rights and feelings of the remainder of the population, that the only resource is to make them conscious of their error by severe punishment; otherwise it is seriously to be feared that members of the public will take the law into their own hands and that regrettable scenes of violence will ensue.

Radio-therapy in Cancer and Skin Diseases.

Dr. Charles Warrenne Allen, professor of dermatology in the New York Post-Graduate Medical School, read recently before the New York County Medical Association a paper on the above subject, in which he reported 28 cases where the use of the x rays had been attended with more or less success. Referring to the question of focus-tube dermatitis and burns, Dr. Allen said that he did not designate such injuries as x-ray burns because he was not thoroughly convinced that it was the x ray *per se* which produced the effect. He believed that the popular dread of those so-called burns and the importance attached to them in radio-therapy by physicians have been over-estimated. Dr. Allen's conclusions were as follows. That the method is one of decided value. But that it is not without its disadvantages and the injudicious or careless use of it may lead to its being brought into disrepute. It is not a method likely to supersede, or to do away with, all previous methods, but it has its decided place of utility. The method appears to be of utility in recurrent cancers. If it proves as valuable as present indications promise there is no reason why it should not be applied to primary cancer. He advises the medical man not to pave the way to disappointment by promising himself or his patient too much from this new method. There is, in the opinion of Dr. Allen, no contra-indication to the employment of other forms of treatment coincidently. The most favourable time to treat cancer, by the ray or otherwise, is early. At this stage the majority of cancers can probably be cured. When cancer has passed beyond a certain stage it does not differ from tuberculosis in its probable fatal result.

Magnesium Dioxide.

A discovery which is said to be of some therapeutic importance has been made recently by Dr. Frederick Elias of Berlin. He has succeeded in obtaining pure magnesium dioxide, MgO_2, which is capable of liberating a large amount of diffusible oxygen, it is said, throughout the system. Magnesium dioxide occurs as an impalpable white powder, tasteless, odourless, non-astringent, non-irritant, non-toxic, and is insoluble in water. According to analysis it is free from barium, strontium, or calcium compounds. It contains no sodium dioxide or caustic potash and therefore it possesses no caustic properties. It is further said to exude large quantities of diffusible, readily assimilable oxygen. The valuable therapeutic qualities which it is asserted this preparation possesses are that it exerts very beneficial remedial and curative effects in the treatment of those diseases arising from deficient oxidation and characterised by alteration of the blood corpuscles or by a qualitative deficiency of the blood itself.

July 13th.

Obituary.

EDOARDO PORRO.

A VALUED correspondent in Italy writes:—"Sectio Caesarea salubrior instituta," such is the "title-deed to fame," such the service to humanity recorded on the all too early grave of this consummate obstetrician and gynæcologist. Born at Padua, of Milanese parents, on Sept. 17th, 1842, Edoardo Porro began his professional studies at the university of his native town and after graduating with great distinction became assistant to more than one of his teachers in the departments of medicine and surgery. In 1866 the war between Italy and Austria for the possession of Venetia called him to the Trentino to serve under Garibaldi; and again in the following year the cry of his chief, "O Roma, o morte" (Rome or death), brought him, a prompt and ardent volunteer, to the battle-fields of Monterotondo and Mentana, where the issue, disastrous for the time to the revolutionary cause, yet led, by "historical necessity," to the culmination of Italian unity with Rome for the capital.

From this brief but glorious episode he again threw himself into professional work and in the December of 1868 we find him assistant physician at the Scuola di Ostetricia of the provincial hospital of Santa Caterina under Professor Pietro Lazzati, in the August of 1870 assistant-in-chief in the same school, and in the March of 1871 successor to Lazzati as director—a post which he held till the November of 1872, when he was appointed consultant obstetrician to the Opera Pia of Santa Corona. Here he remained till 1875, so perfecting himself in the department which had now become his specialty that when the chair of obstetrics fell vacant in the University of Pavia he was at once chosen to fill it, thence, on Nov. 1st, 1882, rising to the post of his ambition, that of director and consultant-in-chief of the Scuola Ostetrica of Milan. His clinical activity was prodigious, his pen barely keeping time with the results of his acute exhaustive observation and swift generalising power. Already, to the May number of 1871 of the *Annali Universali di Medicina*, we find him contributing a striking paper entitled, "Sopra un Caso Singularissimo di Patologia Embriologica," quickly followed by others entitled, "Sopra un Caso di Obliterazione Congenita dell' Esofago" and "Risultati Apparenti e Risultati Veri del Parto Prematuro Artificiale"—the latter paper attracting attention and discussion throughout the whole gynæcological world. In February, 1872, he dedicated to his colleagues his masterly narration of "Un Caso Clinico dell' Aborto provocata per Grave Ristrezza Pelvica da Osteomalacia," initiating a regular campaign, professional and lay, in vindication of the rights of science against dogmatic prejudice. Operations, described in contributions to the journals, continued to succeed others with almost breathless rapidity till on May 21st, 1876, he startled the world with his amply and impressively illustrated memoir, "Della Amputazione Utero-Ovario, come Complemento del Taglio Cesareo," describing the operation, as

original as it was daring, with which his name will be perennially associated. This memoir, translated into the principal contemporary languages, led to the practice of the operation by leading obstetricians of the day, a practice so successful that it has undoubtedly wrought the salvation of thousands of human lives. In Italy alone, Mangiagalli, Truzzi, Bertazzoli, to mention only a few, followed on the lines of the master with almost unvarying success and a quarter of a century afterwards, as recorded in THE LANCET[1] at the time, the gynæcologists of all countries combined in celebrating the first jubilee of the operation, presenting its author with an illuminated address and coining in his honour a medal bearing the inscription with which this obituary notice begins.

Porro's later years were less prolific in literary, though quite as rich in clinical, activity—one cause of this being the multiplication of the offices which he held, offices civic and municipal among others, to which the respect and confidence with which his citizens honoured him inevitably led up. He wrought indefatigably for the rehabilitation of the "Istituti Ospitalieri" of Milan, while for the Ospedale Maggiore he drew up a complete plan of reforms with a view to enhance the efficiency of that venerable and renowned institution. Frequently summoned as an expert before the legal tribunals he upheld the just claims and the dignity of science while extorting from the forensic side the amplest acknowledgments of his judicial fairness and chivalrous urbanity. In sympathy with the freest handling of religious themes, his attitude towards traditional Christianity on the one hand and aggressive "Naturalism" on the other was that of Mr. A. J. Balfour's "Foundations of Belief"—an attitude which kept him on the friendliest terms with Mystic and Agnostic, with Catholic, with Protestant, and with Free-thinker alike. His will, just made public, is a characteristic attestation of his convictions, religious, political, and social; and it is quite in keeping with the simplicity of his life that we read his expressed wish that his "funerali" should be "modestissimi, senza fiori, senza partecipazioni personali."

"He was," says a contributor to the *Secolo* of Milan, "a victim to duty. In performing an operation on an unfortunate woman infected with the 'male Celtico' he wounded his hand. From that day he never succeeded in expelling from his system the fatal poison which manifested itself in diverse viscera, eventually setting up a nephritis, followed by 'crises' of the most alarming kind. His strength declined steadily, uræmic poisoning became only too apparent, whilst the proximate cause of death on the 18th inst. was an attack of pulmonary œdema which every effort failed to overcome." Telegrams of sympathy and condolence have already reached the family from leading gynæcologists, many of them pupils, all the world over; and the sorrow of the Milanese public is giving his funeral a touchingly impressive character which even his testamentary dispositions have been powerless to countervail.

HENRY MARTYN JORDAN, F.R.C.S. ENG., L.R.C.P. LOND.

MR. H. M. JORDAN died at his father's residence, The Knoll, Newport, Mon., on July 14th, from pneumonia which he contracted while on a visit.

Mr. Jordan received his medical education at Guy's Hospital, taking the qualifications of L.R.C.P. Lond. and M.R.C.S. Eng. in 1889 and being admitted to the F.R.C.S. Eng. in 1892. After holding several resident appointments at Guy's Hospital he was appointed lecturer on anatomy and surgery at H.H. the Nizam's Medical School, Hyderabad, Deccan. On his return to England in 1896 Mr. Jordan practised in Weymouth-street, London, and at the time of his death he was surgeon to the Westminster General Dispensary. Mr. Jordan formerly took a great interest in football and had represented Wales in several international matches in 1884 and 1889. The deceased, who was only 37 years of age, was unmarried.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Wilhelm Kiesselbach, extraordinary professor of otology in the University of Erlangen.—Professor Gerhardt of Berlin, whose name will be remembered in connexion with the case of the Emperor Frederick.

[1] THE LANCET, June 1st, 1901, p. 1559.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—In July the following candidates passed in the subjects indicated:—

Surgery.—J. J. Anning, Leeds; F. M. Boclet (Section I.), Charing Cross Hospital; E. C. Curtis, Charing Cross Hospital and Aberdeen; H. G. Daft (Sections I. and II.), Sheffield and University College Hospital; W. T. Harris (Section I.), St. Thomas's Hospital; H. Johnson (Section I.) and F. J. F. Jones (Sections I. and II.), Guy's Hospital; O. Millauro (Sections I. and II.), Westminster Hospital; T. G. Miles (Sections I. and II.), Guy's Hospital; E. H. Noney (Section I.) Calcutta; G. Roper, Cambridge; T. Scatchard (Section II.), Leeds; J. E. Skey (Sections I. and II.), Westminster Hospital; H. H. Sloane (Section II.), St. Bartholomew's Hospital; J. A. W. Webster (Section II.), St. Mary's Hospital; F. C. Whitmore (Sections I. and II.), Bristol; and H. C. S. Woodward, Cambridge and St. Thomas's Hospital.

Medicine.—A. N. Collier (Sections I. and II.), Manchester; H. G. Daft (Sections I. and II.), Sheffield and University College Hospital; D. R. T. Griffiths, Guy's Hospital; S. F. Hickman (Section II.), Royal Free Hospital; G. W. C. Hollist (Sections I. and II.), Guy's Hospital; P. S. Hopkins (Section II.), London Hospital; A. Mooney (Section II.), Royal Free Hospital; C. H. Osmond (Section I.), Glasgow; and T. Scatchard (Sections I. and II.), Leeds.

Forensic Medicine.—H. J. Aldous, King's College Hospital; A. N. Collier, Manchester; H. G. Daft, Sheffield and University College Hospital; J. W. Elliott, St. Mary's Hospital; D. R. T. Griffiths and G. W. C. Hollist, Guy's Hospital; E. A. Houchin, Middlesex Hospital; C. H. Osmond, Glasgow; H. H. Sloane, St. Bartholomew's Hospital; and H. C. S. Woodward, Cambridge and St. Thomas's Hospital.

Midwifery.—E. W. C. Bradfield, St. Mary's Hospital; H. G. Daft, Sheffield and University College Hospital; L. E. Ellis, St. George's Hospital; D. M. Evans, Guy's and Westminster Hospitals; J. Ewing, Leeds; W. P. Jones, Sheffield; D. J. Lewis, London Hospital; A. Mooney, Royal Free Hospital; H. G. Sewell, London Hospital; S. J. Weinberg, Manchester; and H. C. S. Woodward, Cambridge and St. Thomas's Hospital.

The diploma of the society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—E. C. Curtis, H. G. Daft, S. F. Hickman, G. W. C. Hollist, E. A. Houchin, T. G. Miles, O. Millauro, G. Roper, T. Scatchard, J. E. Skey, H. H. Sloane, and H. C. S. Woodward.

THE ROYAL DENTAL HOSPITAL OF LONDON: CONVERSAZIONE.—A very successful social evening was spent in the Royal Institute Galleries, Prince's Hall, Piccadilly, on Friday, July 18th, 1902, by the staff, students, and friends of the Royal Dental Hospital of London on the occasion of the prize distribution. Sir Arthur W. Rücker, D.Sc., LL.D., F.R.S., principal of the University of London, presented the prizes to the successful students. The dean in offering a hearty welcome to Sir Arthur Rücker gave a short sketch of the progress of the hospital and school, and it was decided to send a message of loyalty to the King and an expression of thankfulness for His Majesty's restoration to health and of gratitude for the honour which he had recently conferred upon the institution by desiring it to be called a Royal hospital. An excellent programme of music and other entertainments was provided.

HOSPITAL SATURDAY IN DEVONPORT.—July 19th was observed in Devonport and Stonehouse as Hospital Saturday. The factory employés of the Keyham and Devonport dockyards have a separate organisation with a hospital committee of their own and they annually contribute about £180 to the Royal Albert Hospital, but the Hospital Saturday Fund proper averages less than £240, and as £160 of this sum are contributed equally by the firm and men of Sir John Jackson (Limited) the total sum raised by all the remaining working men of Devonport and Stonehouse is only £80. This is a ridiculously small sum and it is to be hoped that the amount raised this year will be largely in excess of the previous years.

THE HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.—Presiding at the annual meeting of the Hospital for Epilepsy and Paralysis, held for the first time at the new building in Maida Vale, the President, the Earl of Hardwicke, referred to the fact that had it not been for a large and unexpected bequest that building must have stopped short at the ground floor, as the committee had wisely determined at one time that it must do. To equip the first section of the new hospital £2500 would be required and for this sum the President made an earnest appeal with the view of enabling the committee to utilise the fine building now requiring only to be fitted and furnished. The adoption of the annual report was seconded by Canon Duckworth and the re-election of the retiring members of committee was moved by Sir Owen Tudor Burne.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Midwives Bill.

THE amendments made in the Midwives Bill by the House of Lords were taken into consideration by the House of Commons on Monday, July 21st, and were one and all accepted. The Bill therefore awaits the royal assent before becoming law.

HOUSE OF COMMONS.

WEDNESDAY, JULY 16TH.

Notification of Infectious Disease in Ireland.

Mr. FIELD asked the Chief Secretary to the Lord Lieutenant of Ireland whether he would consider the advisability of introducing a Bill this session to assimilate the law regarding the Infectious Disease (Notification) Act, 1889, and the Infectious Disease (Prevention) Act, 1890, in Ireland and Great Britain, so as to make notification compulsory by urban or rural sanitary authorities in Ireland.—Mr. WYNDHAM replied: A Bill has been drafted on the lines suggested by the question. I am prepared to bring it in, but could not undertake to find time for any but the briefest discussion.

THURSDAY, JULY 17TH.

Poor-law Medical Officers and Operations.

Dr. FARQUHARSON asked the President of the Local Government Board whether he would explain why, under regulations of the Local Government Board, no provision whatever had been made for the administration of anæsthetics when operations had to be performed by Poor-law medical officers on sick paupers at a distance from a hospital or workhouse infirmary; and why no alteration had been made in the scale of fees allowed for special operations performed by Poor-law medical officers since the year 1847, many important operations, which had now become general, not having been added to the original list.—Mr. LONG replied: The first matter referred to in the question has been dealt with by the Local Government Board by means of a circular letter which they issued to boards of guardians in November, 1894. In that letter the Board recommended that under ordinary circumstances a case in which a serious operation was required should not be treated in a workhouse or at the patient's home, but should be sent to a public hospital. They stated, however, that in any case when the latter course was not practicable, or when the operation was not of a serious character, they were prepared, if an anæsthetic was required, to consider an application from the guardians for sanction to the payment to the medical officer of a reasonable sum in respect of any assistance which it was necessary for him to obtain in connexion with the administration of the anæsthetic or of other cost incurred in connexion with its use. It has been the invariable practice of the Board to give their sanction to reasonable payments proposed to be made by boards of guardians to medical officers in circumstances of the kind referred to. I am not aware that difficulties have been experienced in connexion with the scale of fees to Poor-law medical officers for operations, but if representations are made to me showing that alterations are required, I shall be willing to give the subject careful consideration. At the same time I would repeat that under ordinary circumstances cases requiring serious operations should not be treated in a workhouse or at the patient's home, but should be sent to a public hospital.

THE MEDICAL SERVICE OF THE ARMY.

In Committee of Supply on the vote of £1,025,000 for the medical establishments of the army

Colonel WELBY urged the War Office to see that the medical service of the army was maintained in proper strength and efficiency.

Mr. H. C. RICHARDS called attention to the practice of requiring several signatures before medical stores could be obtained in time of war for those who needed them, and advocated the introduction into the system of a little practical common sense.

Mr. BRODRICK said that in this connexion immense progress and immense amelioration had taken place within the last few years. The House of Commons had done good service in calling attention to the weakness of this part of the administration of the army, and he would remind the House that it had allowed him to make a great addition to the medical establishments. He could only say that he believed the system now set on foot, which had involved his asking Parliament for a large number of extra medical officers with a considerable increase of pay and provision for classes and study leave and other things would bring the Army Medical Service into line with the best civilian practitioners of the day.

Major JAMESON insisted that the condition of things in the Army Medical Service was still far from satisfactory, and recommended the department to offer employment to the civilian doctors who had come to the assistance of the army during the war.

Colonel WELBY asked for an answer to this definite question—whether in the future it would be possible for the War Office by a stroke of the pen to transfer a medical officer from one army corps to another.

Sir JOHN BATTY TUKE said that he could not but think that certain of the hon. Members who had spoken were not aware of the important steps taken by the Secretary for War to reorganise the Army Medical Service. They had gone back in the past and there was a great temptation for one who had followed the history of that service from the Crimean war down to the present time to do the same. But he was content to refrain from doing so, as far as possible, as he believed the scheme now at work was a whole-hearted attempt to reform the service and to do justice to the army medical officers. He begged to congratulate the right hon. gentleman on the adoption of a new administrative principle. All previous Ministers for War had proceeded on the assumption that they could work the machine independently of the great medical schools and the feeling of the medical profession at large. As a consequence all previous attempts to reform the service had failed, mainly, though not entirely, from the non-recognition of the principle. Not entirely, for failures had also been due to maladministration of former warrants and retrocessions on the part of the War Office in carrying out their provisions. That the right hon. gentleman had become convinced of the necessity of recognising this principle was shown by the fact that of the 11 members of the committee appointed by him in 1901 to consider the reorganisation of the medical service seven were civilians, all men who were connected with important medical schools, and by the further fact that, on the advice of that committee an Advisory Board had been established, four of the members of which were civilians. He begged to congratulate the Minister for War on the establishment of this principle, notwithstanding that he could not agree with him entirely on the manner in which he had applied it. The first objection was that it would be impossible for these four gentlemen to perform all the duties which were laid upon them. The board was to meet at fortnightly intervals, to report on all matters connected with medicine, surgery, and sanitation as they affected the military services; to advise on the provision and equipment of hospitals; to submit a scheme for the expansion of the service to meet the needs of war; to report on plans for hospitals, barracks, and camps; to arrange for the annual inspection of each of the military hospitals, such inspection to be usually made without notice; to supervise the examinations of candidates; and to consider the promotion of officers. How was it possible for men in active practice to perform such multifarious duties for a mere pittance of £200 year? It was impossible, and it would be found in practice that these four gentlemen could only have referred to them special points for their advice and consideration. This would be a most important function for them to perform, but that they could carry out all that was imposed on them by the report was impossible. Further, he wished that the hon. gentleman had carried out the special recommendation of Sir William Thomson who did such excellent work in South Africa. He as a member of the committee, in a minority report, recommended that the Advisory Board should be composed of representatives of the medical schools in the several divisions of the kingdom. The Secretary for War had accepted this principle as regards Ireland and England, but had evaded it so far as Scotland was concerned. It was true that he had appointed a gentleman in London who held a Scottish degree but had no other connexion: he had lived all his life in London, could in no way represent the feeling in Scottish schools or adequately represent the genius of the country, and had not had any connexion with military matters. It consisted with his knowledge that the Secretary for War took a great deal of trouble to secure a practitioner resident in Ireland, and that he never once entered into communication with anyone connected with Scotland or in any way consulted the feelings of the schools of that country. He might ride off on the statement that of the military members of the Advisory Board two or three were Scottish graduates. Such an argument was futile, as these gentlemen had lived their lives in the service and could not be *ex rapport* with professional feeling in the North. The Secretary for War might as well argue that because the Prime Minister and the leader of the Opposition were both Scots, the electoral representation of Scotland was on an equable footing with that of Ireland. It should be remembered that about one-third of the medical recruits came from the North, which afforded the highest class of candidates. He was not arguing this from a mere provincial point of view. It was impolitic to ignore and flout these great schools. When they came to consider that any scheme for the expansion of the service must depend on the assistance provided by universities, schools, and hospitals it was evidently a wise policy to keep in close touch with teaching institutions on which must depend to a great extent any scheme for an Imperial Medical Reserve. The establishment of an Imperial Medical Reserve must be a chief object to be kept in view by the Secretary of State. It was impossible to keep up a standing medical force during times of peace sufficient for the sudden emergencies of war. This was one of the lessons we had learnt from the late war. The Army Medical Service must be made capable of rapid expansion, and this could only be effected by appealing to civilians. This was not the time to propound a scheme for the establishment of such a body, but it might be said with certainty that the War Office would have to come to the teaching institutions of the country and demand their assistance in formulating a scheme by which a system of units could be established ready to act under any emergency. Under these circumstances it would have been more politic for the Secretary for War to do everything in his power to maintain the *entente cordiale* with important centres of medical education. What they did in haste during the late war must be provided for at leisure. As to the new Royal Warrant, he would have liked to have spoken at more length, but he saw other medical members present who might desire to speak. He believed it would work well. The pay was fair; the system of examination for promotion was sound. It would do much to prevent slackness and would give an opportunity for the better men to show what they were made of. In every service there were two curses—seniority and private influence. If the system of examination were made to exercise its due influence, if it were taken along with each man's service record, it would serve a most important function in neutralising these curses. But it must also be remembered that the thorough working of the new warrant would depend on the maintenance of the Royal Army Medical Corps at a proper level. The arrangements for leave and study leave could not be worked unless the service were numerically sufficient. The warrant might easily break down in many of its most important provisions if the service were starved. But in the hope that no retrocessions would occur, as they had occurred as regards previous warrants, he begged to congratulate the Secretary for War upon the earnest effort he was making to produce a really efficient service.

Dr. FARQUHARSON said that while in former days those in charge of the affairs of the army had tried to legislate for the medical service without reference to the class from which the members of that service must be drawn, he thought he saw in the regulation now issued by the Secretary of State a sincere desire to take into his confidence the great medical schools and teaching bodies in order to get terms which might be acceptable to them, and to those whom they taught. He frankly acknowledged that in the new warrant there were important and valuable alterations. In fact, the new warrant would make things much more acceptable to the medical profession generally, and he believed that it would end in this—that a large number of students would come to the service. In his opinion the terms now offered were, on the average, very favourable. They were very different from those offered 30 years ago when he entered the service. As to the late war, his opinion was that in no former war had the general results of medical and surgical treatment

been so successful, and he thought the Army Medical Department was entitled to great credit for those results. He congratulated the Secretary of State on making the Director-General of the Army Medical Department a member of the new Army Board. He was not quite so sure about the new Advisory Board. He was not quite so enthusiastic as the last speaker about the inclusion of the civilian element. He thought that the old plan was a good one of having a director general with three or four subordinates, each taking up a particular department of work, and all combining to discuss questions from the purely medical point of view. He hoped, however, that the new arrangement might be found to work well. Though he did not wish to appear in a critical mood, he was bound to say that he thought the remuneration was rather small. On behalf of the medical profession he thanked the right hon. gentleman for his admirable warrant, which he believed would bring peace and contentment to the Army Medical Department, and which he sincerely hoped would establish better relations with the great medical schools and cause a steady flow of their very best candidates to the service. He would like the right hon. gentleman to explain the exact situation of the new hospital which was going to be started in London for army medical officers and what relation it would bear to the hospital at Netley.

Mr. BRODRICK said that he was unable to answer the hon. member specifically because the new arrangements in London had not yet been absolutely completed, though he was pressing forward the matter as fast as he could. He was glad to hear what the hon. member had said because he had received the report of a speech delivered some time ago by him in Scotland in which he denounced the scheme for the reorganisation of the Army Medical Service as a total failure in all respects. He thought that the scheme had in the main greatly commended itself to the medical profession. Of course there would be criticisms, and those he would be glad to have, but the immense change which had been made by introducing civilian members to the Advisory Board was a change which he believed to be of the greatest benefit to the army. His hon. friend (Sir John Batty Tuke) read out the long list of subjects with which the Board had to deal. He admitted that it was a long list, but he thought that the business-like character of the work done, its thoroughness and efficiency, and the time which these medical gentlemen, themselves in large practice, were giving to the public service, were things which the army and the public had not sufficiently recognised. Nothing that they could give them would be enough to compensate them for the time and patience which they had expended in the service, and he thought that they had the greatest reason to be grateful to them. He did not think that the Board could have worked more admirably. He knew that it was about to undertake the inspection of the hospitals on the lines laid down. As to the constitution of the Board, he confessed that his hon. friend had forestalled his line of argument. It was quite true that in selecting a Scottish graduate he was not able to contemplate asking the leading man of the Scottish profession to attend in London, but he rather set himself to get a man of ability and experience in London who could give regular attendance to the work of the board. But in reality Scotland had nothing to complain of, for nearly one-half of the Advisory Board were Scottish graduates. He assured his hon. friends that there was every desire to act as thoroughly as they could, not merely with the London medical schools but with the provincial schools and the Scottish and Irish and colonial schools. The change had had one remarkable effect already: up to last year they had not been able to fill their vacancies or to obtain a sufficient number of candidates of adequate standing. In the last few days the result of the general improvement and the increase of confidence on the part of the medical profession had been such that for the 32 vacancies there were between 70 and 80 candidates. He was quite certain that nothing would be wanting on his part to increase this confidence. He attached the greatest importance to the arrangements which they were making for study leave and for the training of officers during intervals of their service. They had adopted for the medical service what was practically the short service system. If a man joined the medical service and after three or four years' experience did not like it, then he could return to civilian life. He believed that the other proposals, such as trying to attach a medical officer to a unit at the beginning of his service and thus giving him a sort of home and providing against these too frequent moves which had had an irritating effect, would all contribute to the popularity and efficiency of the service. It was impossible yet to see the results of the reform, but he felt great confidence in the future. They had had a most favourable start. He was well aware that they had errors to make good—errors of knowledge and experience—but in these, as in other respects, they had taken to heart the lessons of the war and he was very sanguine that those who followed him would see that whatever else had been done for the army during his administration at all events a long step forward in this important service had been taken.

Mr. RICHARDS asked whether the right hon. gentleman intended to continue the system under which several signatures were required before a dying man could get the medical comforts he needed. He said that a salary of £200 a year was altogether inadequate for the civilian members of the Advisory Board.

Mr. BRODRICK said that the best proof he could perhaps offer that the very best men in the medical profession had given their services to this most important work was that among the number were Sir Frederick Treves and Mr. Fripp. He could make no statement off hand as to what was required in the way of signatures. He should never dream of keeping things from people who required them, but he would remind his hon. friend that in time of war stores must be carefully husbanded.

Colonel WELBY moved a reduction in the vote of £100 in order to elicit from the Secretary of State an answer to his question.

Mr. BRODRICK said that he was perfectly ready to answer the question. The whole Royal Army Medical Corps, with the exception of a very few officers, had been engaged in South Africa and at the present moment they had to rely to a large extent on civilians for the different stations at home. Therefore the new system had not yet got into working and until they could bring medical officers home in large numbers, which he hoped would be soon, it could not be put in force.

Colonel WELBY said that what he wanted to know was whether by a mere stroke of the pen an army doctor could be moved from one army corps to another.

Mr. BRODRICK said that they had got a new Director-General who had established a variety of changes, and his scheme had not yet been put in operation, and therefore he could not at present answer the question.

Major JAMESON asked whether the right hon. gentleman would take steps to have the old forms for requisitions altered.

Mr. BRODRICK replied that he was perfectly willing to undertake that fuller attention would be given to the simplification of these forms.

The motion for the reduction of the vote was withdrawn and the vote itself was agreed to.

FRIDAY, JULY 18TH.

London Water Question.

The House devoted practically the whole of its sitting to the consideration in Committee of the London Water Bill. An attempt was made to raise the question of the ruling of Lord Balfour of Burleigh in the Joint Committee, but the Chairman decided that it was not competent for the House of Commons to criticise the action of a member of the House of Lords. The first clause of the Bill was still under discussion when the adjournment took place.

BOOKS, ETC., RECEIVED.

ALCAN, FÉLIX, 108, Boulevard Saint-Germain, Paris.

Physiologie. Travaux du Laboratoire de M. Charles Richet, Professeur à la Faculté de Médecine de Paris. Tome cinquième. Muscles et Nerfs, Thérapeutique de l'Épilepsie, Zomothérapie, Réflexes Psychiques. Price 12 francs.

AMERICAN PEDIATRIC SOCIETY (Recorder and editor, Walter Lester Carr, M.D.), 68, West Fifty-first-street, New York.

Transactions of the American Pediatric Society. Thirteenth Session, held at Niagara Falls, N.Y., May 27th, 28th, and 29th, 1901. Vol. xiii. Price not stated.

ASH AND CO., LIMITED, 42, Southwark-street, S.E.

Guy's Hospital Nursing Guide, Handbook of Past and Present Nurses' League, and Register of Nurses. 1902. Price 1*s.* 6*d.*

BATH CORPORATION, Baths Committee of the, Bath.

Medical Guide to the Hot Mineral Baths of Bath, with Extracts from the Report of the Special Commission of THE LANCET. Price not stated.

BAUERMEISTER, F., 49, Gordon-street, Glasgow (J. F. BERGMANN, Wiesbaden).

Die Neueren Augenheilmittel. Für Aerzte und Studierende. Von Dr. M. Ohlemann, Augenarzt in Wiesbaden, Kgl. Preuss. Kreiswundarzt A.D. Price 3*s.* 9*d.* or M. 3.60.

Lehrbuch der Hautkrankheiten. Von Professor Dr. Eduard Lang, K. K Primararzt im Allgemeinen Krankenhause in Wien Price 14*s.* 9*d.* or M. 14.60.

Die Therapeutischen Leistungen des Jahres 1901. Ein Jahrbuch für Praktische Aerzte. Bearbeitet und herausgegeben von Med. und Chir. Dr. Arnold Pollatschek, Brunnenarzt in Karlsbad. XIII. Jahrgang. Price 8*s.* or M. 8.

Die Laune Eine Aerztlich-Psychologische Studie. Von Dr. Ernst Jentsch. (Heft XV. der "Grenzfragen des Nerven- und Seelenlebens," herausgegeben von Dr. L. Loewenfeld in München und Dr. H. Kurella in Breslau.) Price 1*s.* 6*d.* or M. 1.20.

Die Taubstummheit, auf Grund Ohrenärztlicher Beobachtungen. Eine Studie zur Gewinnung einer Künftigen Verlassigen Taubstummenstatistik. Für Aerzte und Taubstummenlehrer. Von Dr. Friedrich Bezold, Professor an der Universität München und K. Hofrath. Price 4*s.* or M. 4.

BELL, ERNEST, York-street, Covent-garden, W.C.

Essays in Medical Sociology. By Elizabeth Blackwell, M.D. Volumes I. and II. Price not stated.

CORLENTZ, OSCAR, Berlin, W., 35.

Kurzes Lehrbuch der Krankheiten der Oberen Luftwege. Von Prof. Dr. Holger Mygind, in Kopenhagen. Price not stated.

FISCHER, GUSTAV, Jena.

Archiv für Protistenkunde. Herausgegeben von Dr. Fritz Schaudinn, in Rovigno. Erster Band. Erstes Heft. Preis pro Band 24 marks.

Ehrlich's Seitenkettentheorie und ihre Anwendung auf die Künstlichen Immunisierungsprozesse. Zusammenfassende Darstellung. Von Professor Dr. Ludwig Aschoff, Göttingen. Abdruck aus der Zeitschrift für Allgemeine Physiologie, I. Band, III. Heft, 1902. Preis M.4.50.

Zeitschrift für Allgemeine Physiologie. Herausgegeben von Dr. Max Verworn, Professor der Physiologie und Direktor des Physiologischen Instituts an der Universität Göttingen. Erster Band. Erstes Heft. Preis pro Band M.24.

Von der Nervenzelle und der Zelle im Allgemeinen. Von Paul Kronthal. Price M.16.

GLAISHER, HENRY J., 57, Wigmore-street, Cavendish-square, W.

Small-pox: How it is Spread and how it may be Prevented. Drawn from the Facts of the Warrington Small-pox Epidemic of 1892-93. By James Wallace, M.A., M.D. Aberd. Price 2*s.* 6*d.* net.

HARRISON AND SONS, 45, St. Martin's-lane, W.C.

International Catalogue of Scientific Literature. First Annual Issue. M. Botany. Vol. I., Part I. 1902 (May). (MS. completed January, 1902.) Published for the International Council by the Royal Society of London. Price 21*s.*

International Catalogue of Scientific Literature. First Annual Issue. D. Chemistry. Vol. II., Part I. 1902 (June). (MS. completed January, 1902.) Published for the International Council by the Royal Society of London. Price 21*s.*

J. B. LIPPINCOTT COMPANY, 5, Henrietta-street, Covent-garden, W.C.

International Clinics: A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles by Leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A.M., M.D. Philadelphia, U.S.A., and others. Vol. i. Twelfth series, 1902. Price 10*s.* net per volume.

JEWSBURY AND BROWN, Ardwick Green, Manchester.

The Evolution of Artificial Mineral Waters. By William Kirkby, F.I.S., Lecturer on Pharmacognosy in the Owens College. Price 3s. 6d.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, E.C.

Higher Mathematics for Students of Chemistry and Physics, with Special Reference to Practical Work. By J. W. Mellor, D.Sc., late Senior Scholar and 1851 Exhibition Scholar, New Zealand University; Research Fellow, the Owens College, Manchester. Price 12s. 6d. net.

PENTLAND, YOUNG J., Edinburgh and London.

The Edinburgh Medical Journal. Edited by G. A. Gibson, M.D., F.R.C.P. Ed., and Alexis Thomson, M.D., F.R.C.S. Ed. New Series. Vol. XI. Price not stated.

Text-book of Anatomy. Edited by D. J. Cunningham, F.R.S., M.D. (Edin. et Dubl.), D.Sc., Professor of Anatomy and Chirurgery, Trinity College, Dublin. Price not stated.

RALPH, HOLLAND, AND CO., Temple Chambers, E.C.

The Hygiene of Schools and Scholars. For Teachers and Parents. By H. Beale Collins, D.P.H., &c. Price not stated.

REBMAN, Limited, 129, Shaftesbury-avenue, Cambridge-circus, W.C.

The Diseases of Women. A Handbook for Students and Practitioners. By J. Bland-Sutton, F.R.C.S. Eng., and Arthur E. Giles, M.D., B.Sc. Lond., F.R.C.S. Edin. Third edition. Price 11s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BAILEY, J. C. MAXWELL, M.B. Lond., has been appointed House Surgeon to the West London Hospital.

BAUMANN, E. P., M.D. Edin., M.R.C.S. Eng., has been appointed Medical Registrar to the Hospital for Sick Children, Great Ormond-street.

BAYLY, H. WANSEY, M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the West London Hospital.

DYER, C. HAROLD, M.D., C.M. Aberd., has been re-appointed Medical Officer of Health to the Cleckheaton Urban District Council.

EVANS, ARTHUR, M.S., M.D. Lond., F.R.C.S. Eng., has been appointed Surgeon to Out-patients, with duties at the Branch Hospital in the Royal Albert Dock (to which is attached the London School of Tropical Medicine).

HUNTER, WILLIAM, M.D. Edin., F.R.C.P. Lond., has been appointed Physician to the London Fever Hospital in succession to the late Dr. J. W. Washbourn.

MACDOWALL, W. M., L.R.C.S., L.R.C.P. Lond., has been appointed Locum Assistant Medical Officer to the Glamorgan County Asylum.

POLLOCK, A. H., has been appointed House Surgeon to the West London Hospital.

RIGBY, HUGH MALLINSON, M.B., M.S. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the London Hospital.

WALLACE, J., M.D. Aberd., has been appointed Certifying Surgeon under the Factory Act for the Stonehaven District of Kincardineshire.

WOODHOUSE, C., M.D. Cantab., has been appointed Certifying Surgeon under the Factory Act for the Urban Districts of Esher and the Dittons, East and West Molesey, and Walton-on-Thames.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident House Surgeon. Salary £100 per annum, with board, residence, &c.

BATH ROYAL UNITED HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL.—House Surgeon. Salary at the rate of £50 per annum.

BIRMINGHAM WORKHOUSE.—Medical Man, for three weeks at least, about August 6th. Remuneration £3 3s. a week and all found.

BRISTOL ROYAL INFIRMARY.—Junior House Surgeon and Anæsthetist, also Casualty Officer, for six months. Salaries at rate of £50 per annum, with board, lodging, and washing.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.—Assistant Anæsthetist.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Resident Medical Officer. Salary £100 per annum, with board, &c.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Assistant Surgeon. Also Assistant Physician.

EAST SUFFOLK AND IPSWICH HOSPITAL, Ipswich.—Second House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

GRAVESEND HOSPITAL.—House Surgeon. Salary £90 per annum, with board and residence.

HAYDOCK LODGE ASYLUM, Lancashire.—Assistant Medical Officer. Salary £175 a year, with furnished quarters, board, washing, &c.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE, Virginia Water, Surrey.—Junior Assistant Medical Officer. Salary £150 per annum, rising to £200, with board, lodging, and attendance.

ITALIAN HOSPITAL, Queen-square, London, W.C.—Honorary Assistant Dental Surgeon.

LEEDS GENERAL INFIRMARY.—Resident Ophthalmic Officer. Salary £50 a year, with board and lodging.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £100 per annum, with board and apartments.

LONDON THROAT HOSPITAL, 204, Great Portland-street.—House Surgeon for six months. Salary at rate of £50 per annum.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £90, with residence, board, and washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—Registrar. Honorarium 50 guineas per annum.

NEWCASTLE-ON-TYNE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer. Salary £100, with board, lodging, and laundry.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

NORTH CAMBS HOSPITAL, Wisbech.—Resident Medical Officer. Salary £150 per annum, with furnished house.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months, with board, apartments, and washing. Honorarium at least £25.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Assistant Surgeon.

NOTTINGHAM GENERAL DISPENSARY.—Senior Resident Surgeon, unmarried. Salary £200 per annum, increasing by £15 every year. Also Assistant Resident Surgeon, unmarried. Salary £160 per annum, increasing by £10 every year, with apartments, attendance, light, and fuel in each case.

ROTHERHAM HOSPITAL AND DISPENSARY.—Senior House Surgeon. Salary £110 per annum.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon. Salary at the rate of £30 per annum, with board, lodging, and washing.

ROYAL LANCASTER INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with residence, board, attendance, and washing.

ST. GILES (CAMBERWELL) WORKHOUSE, Gordon-road, Peckham.—Assistant Medical Officer. Salary £120 per annum, with apartments and allowance of £1 1s. weekly in lieu of board and washing.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, Red Lion-square, High Holborn, W.C.—Honorary Assistant Surgeon.

SALOP INFIRMARY.—Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board and apartments.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried. Honorarium at the rate of £60 per annum, with residence, board, and washing.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon. Salary at rate of £40 per annum, with board, washing, and residence.

SUSSEX COUNTY HOSPITAL, Brighton.—Second House Surgeon and Anæsthetist, unmarried. Salary £80 per annum, with board and residence.

TORQUAY, PARISH OF.—Medical Officer. Salary £100 per annum.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, and VICTORIA CONVALESCENT HOME, Broadstairs.—House Physician. Honorarium of £25 and will be provided with board and lodging in the Hospital.

WANDSWORTH AND CLAPHAM UNION, Tooting Home, Church-lane, Tooting.—Temporary Assistant Medical Officer. Salary £4 4s. a week, with board, lodging, and washing.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

FINCH.—On Sunday, July 20th, at Purston, Pontefract, Yorks, the wife of W. Stanley Finch, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.

GUBBINS.—On July 16th, at Kildare-terrace, Bayswater, W., the wife of Colonel W. L. Gubbins, M.B. Dubl., R.A.M.C., of a son.

SMITH.—On July 13th, at Beauclerc-road, Hammersmith, the wife of Major H. Smith, M.D. R.U.I., I.M.S., of a son.

MARRIAGES.

JONES—STRANACK.—On July 16th, at St. Hilda's Church, Whitby, Yorks, by the Rev. Canon Austen, R.D., assisted by Rev. M. A. Horsfall, Arthur Reginald Jones, M.R.C.S., L.R.C.P., to Violet Maude, daughter of Frederick Stranack, Esq., of Bombay. Indian papers please copy.

WARD—HILL.—On Tuesday, July 22nd, at St. John's, Torquay, by the Rev. Rowland B. Hill, M.A., Rector of Colne Engaine, Essex, cousin of the bride, assisted by the Very Rev. V. L. Rorison, D.D., Dean of St. Andrew's, and the Rev. Basil Airy, M.A., Vicar of the Parish, Thomas Hamilton Ward, M.D., of Paignton, to Emma Vivian, only daughter of H. Grylls Hill, Esq., of Hillesdon, Torquay.

DEATHS.

BATEMAN.—On July 21st, at Charles-street, St. James's, Frederick Augustus Newton Bateman, M.D. Durh., aged 51 years.

STEDMAN.—On July 16th, at Radcliffe-square, S.W., John Buck Stedman, F.R.C.S., late of Brook House, Godalming, aged 82 years.

WATT.—On July 3rd, at his residence, Oaklands, Niagara-on-the-Lake, Ontario, Canada West, in his 80th year, T. Halliday Watt, M.R.C.S., L.S.A., formerly of Deal, Kent.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE SEQUEL TO VACCINATION WITH GLYCERINATED CALF LYMPH.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of June 21st you accuse me of "circulating a silly circumstantial lie" respecting the death, in 15 days after vaccination, of Job Williams, aged 29 years, who lived at 20, Kenmont-gardens, College-park, W. You say you "addressed a letter to Messrs. Warner and Co., Flora Wharf, Harrow-road [by whom Williams was represented to have been employed), begging particulars of the tragedy, and that a reply duly reached you from West's Stourbridge Brick Co. Ltd., whose depôt is the Flora Wharf, Harrow-road, W., and who sign as 'late Warner and Co.,' saying that no such has ever been in their employ as Job Williams and that, as far as they know, there is no truth whatever in the story." This you are pleased to call "making inquiry into the facts," and on the strength of this alone you base the above accusation against me. Will you kindly permit me to say that by some inadvertence an error has been made as to the firm by whom Williams was employed, his employer being Mr. C. Warner, a contractor and manager of the Harrow-road and Paddington Tramways Company, and not Messrs. Warner and Co., Flora Wharf, Harrow-road, as stated in my letter? Apart from this mistake all the statements made in my letter to the press, which you characterise as "silly and malignant falsehoods," are in strict accordance with the facts of the case, which were given by Williams's widow to Mr. J. H. Bonner, a gentleman of Leicester, and have since been corroborated by the investigations of a member on the staff of a leading London daily journal. I may also add that the sum of three guineas was taken to Williams's widow by Mr. Warner's foreman, who told her it had been sent from the hospital. Under these circumstances I refuse to accept your view that I "owe apologies all round for circulating a silly, circumstantial lie," but think an apology due from you for levelling this charge against me before *really* investigating the facts.

I am, Sirs, yours faithfully,

Bradford-on-Avon, July 16th, 1902. J. WEST.

*** We ought not to have jumped to the conclusion that the whole story was false. Mr. West wrote in a newspaper, under the title "The Sequel to Vaccination with Glycerinated Calf Lymph," that a man named Job Williams, while employed at the Flora Wharf, Harrow-road, by a firm named Warner, was "slain at the altar of this modern Moloch," meaning that vaccination, or revaccination, had killed him. We applied to the firm in question who denied the story. Mr. West now says his story is true but that the name of the firm who employed Job Williams was wrongly given. As he holds the firm up to contempt, talking about "a black list of labour employers who make the dismissal of their employés the only alternative to the refusal of their hateful delusion. Most surely upon such rests the moral responsibility for the serious disasters," &c., we cannot regard the mis-statement, which he admits without a word of remorse, as other than a serious one. It was the mis-statement which led us to refuse credence to the rest of the story and which caused us to use words which we regret. But we cannot subscribe to Mr. West's assertion, whether made on the strength of the investigations of a gentleman of Leicester or out of his own knowledge, that Job Williams died on account of revaccination. The death certificate stated the cause of death to be acute pneumonia. This fact is suppressed in Mr. West's account of the case in the newspaper and in his letter to us.—ED. L.

(1) SANITARY SKIRT PROTECTOR; AND (2) WASHABLE SANITARY TOWEL.

WE have received from "Cumming's Patents" of 2, Army and Navy Mansions, London, S.W., specimens of outfits designed for wear during the menstrual discharge. The first is a sanitary skirt protector which consists of an apron of special material to be worn at the back beneath the skirts. It is suspended from the waist by means of a tape or band and is useful during incontinence of urine or copious menstrual flow, tending to prevent the soiling of the clothes. The improvement in the sanitary towel is due partly to the comfort in wearing which it affords by being suspended from the four corners of a narrow elastic belt worn round the waist. The towel is made of Turkey towelling and forms its own absorbent pad. These sanitary appliances have excellent objects in view—viz., comfort to the wearer, effectual absorption of discharge, and the prevention of soiling.

FEES FOR MEDICAL WITNESSES IN POLICE-COURTS.

A CORRESPONDENT holding the post of house surgeon in a provincial infirmary writes to us saying that he was summoned to a police-court to give evidence in an assault case. The police-court was over three miles from his residence and the fee offered was 10*s.* 6*d.* He demanded one guinea which, however, was refused on the ground that the justices considered 10*s.* 6*d.* sufficient to compensate him for loss of time and out-of-pocket expenses. Our correspondent wishes to know if he is not entitled to one guinea. A medical witness is to be allowed "if resident in the city, borough, parish, town, or place where the examination is taken, or within a distance not exceeding two miles from such place, ... a sum in the discretion of the magistrate or magistrates for each attendance not to exceed 10*s.* 6*d.*" "If he shall reside elsewhere" the sum is not to exceed £1 1*s.* We quote the material portion of the regulations of 1858 which govern the fees of medical witnesses in 1902. It will be observed that there is a discretion allowed to the magistrates, subject to the rule that the fees must not exceed the amounts named. In these circumstances we regret that our correspondent appears to have no remedy.

SANATORIUMS IN SOUTH AFRICA.

To the Editors of THE LANCET.

SIRS,—Would you or any of your readers be good enough to give me some information about a sanatorium for tuberculosis that I understand has been opened at Bloemfontein? I am sending a patient out there and should like him to have the advanatge of a sanatorium if possible.

I am, Sirs, yours faithfully,

July 19th, 1902. SANATORIUM.

OBJECTIONABLE ADVERTISEMENTS.

A CORRESPONDENT has sent us two pages of a Sheffield paper, the *Weekly Telegraph* of July 19th. It contains the official scale of prices for advertisements together with an announcement as follows: "Objectionable advertisements not inserted." Yet on the same page as this announcement we find advertisements of various quack remedies for the cure of fits, eczema, deafness (this complaint being advertised as curable by the well-known quack F. Clifton), drunkenness, and grey hairs. These are bad enough, but there are also two abortionist advertisements—namely, those of Martin's Apiol and Steel Pills and the Venus Female Pills, which are to be obtained of the Manager, Newcastle Herbal Medicine Stores, Newcastle-on-Tyne. The proprietors of the Sheffield *Weekly Telegraph* are Sir W. C. Leng and Co., to whom we recommend a perusal of the articles on "Quacks and Abortion" published in THE LANCET of Dec. 10th, 17th, 24th, and 31st, 1898. Perhaps they will then reform their standard as to what constitutes an "objectionable advertisement."

THE SINGER MOTOR BICYCLE.

To the Editors of THE LANCET.

SIRS,—During the last five months I have ridden over 1800 miles on this motor with unqualified satisfaction. It is economical, for one horse does my work instead of two; a stableman's wages and a monthly cab bill are saved as well as much time, for I can easily go 20 miles an hour with fairly clear roads. I can pay early visits to urgent cases though the distances be long. At first I had a few troubles arising from ignorance; for instance, I was once stranded through a leakage of petrol. I always now carry the reserve tank full. Proper lubrication is a most important item and is required about every 15 or 18 miles. If a very thick lubricant be used one charge will go for 35 miles, but the engine does not start so easily. Two gallons of the best petrol, costing 1*s.* 6*d.* per gallon, will run 200 miles. With that made by Carless, Cassel, and Co. I can mount any hills without assistance. I have had no troubles with ignition, which is magnetic, and hence there are no accumulators to run short of electricity. In use the machine is noisy, for it is driven by geared cogwheels and not by a belt, which latter is the source of most of the trouble with other motors. It heralds its approach and clears the roads. I have had several side slips caused by crossing tramway lines too obliquely when wet; now I turn off the power and pedal. My wife also has a motor of the same make. She manages it easily and is delighted with it. The price, £70 with the extra tank and horn, is about £20 more than that charged by most other makers, but, in my opinion, it is well worth the extra cost.

I am, Sirs, yours faithfully,

Liverpool, July, 1902. W. T. SHEPPARD, M.D. Aberd.

SANATORIUMS FOR TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—Can any of the readers of THE LANCET recommend a cheap sanatorium for phthisis at, say, from 10*s.* to 12*s.* per week in either England or Ireland? I am, Sirs, yours truly,

July 21st, 1902. BACILLUS.

THE LANCET SPECIAL ANALYTICAL AND SANITARY COMMISSION ON THE IODO-BROMO-SALINE WATERS OF SALSOMAGGIORE.

CONCERNING the above report which was published in our issue of July 12th, 1902, our attention has been directed to the following previous literature on the subject:—Notes on Health Resorts and Sanatoria, Salsomaggiore, its Waters and Baths, by Dr. John Harold late medical registrar, Charing Cross Hospital, and Mr. Percy A. E. Richards, F.I.C., F.C.S.—*British Medical Journal*, Feb. 12th, 1898, page 443. Notes on Health Resorts: Salsomaggiore, Italy, by Mr. John J. Eyre of Rome.—*British Medical Journal*, August 18th, 1900, page 435. Mr. Richards states that the analyses made by THE LANCET Commissioners practically agree with his own examination of the waters.

THE LAW FUND.

TRUSTEES: THE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON, THE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, AND THE MASTER OF THE SOCIETY OF APOTHECARIES OF LONDON.

THE following additional subscriptions have been received by Dr. Paramore, who will be most glad to receive as many more as possible during the next few days so as to make the fund a thorough success. Postal orders and cheques should be made payable to the Law Fund and crossed London and County Bank, Holborn, and sent to Dr. Paramore, 2, Gordon-square, W.C., with as little delay as possible:—

	£	s.	d.
Lord Lister, F.R.S., Grand Order of Merit	10	0	0
Dr. G. H. Mitchell	0	5	0
Mr. E. L. C. Muspratt ...	0	10	6
Mr. John Griffiths	0	10	0
Mr. T. B. Bumpstead ...	2	2	0
Mr. John Thomas Jones	0	7	6
Mr. Edward John Burgess	0	2	6
Dr. A. S. L. Newington ...	1	1	0
Dr. Ewen John Maclean	0	5	0
Mr. R. H. Beardsley ...	1	1	0
Dr. James Anderson ...	1	0	0
Surgeon-Lieutenant-Colonel Samuel Smith, V.D.	0	5	0
Dr. G. W. Thompson ...	0	10	6
Dr. Lloyd G. Smith ...	0	5	0
Mr. R. B. Anderson... ...	0	10	0
Dr. G. C. R. Bull	0	5	0
Dr. G. L. Johnson	2	2	0
Dr. A. Garrod Thomas ...	1	1	0
Mr. J. T. Jackson	0	10	6
Dr. W. G. Alexander ...	0	10	0
Dr. Thomas A. Alexander	0	10	6
Dr. Henry Harvey	0	5	0
Mr. J. Morgan Evans ...	0	5	0
Mr. Samuel Mills	1	1	0
Mr. Henry F. Hann ...	0	10	6
Dr. John Rose Bradford	1	1	0
Dr. Charles Kemp	0	2	6
Dr. M. J. Doidge	0	5	0
Amicus	0	5	0
Mr. Ernest H. Helby ...	0	2	6
Dr. James Neil	0	10	6
Frater (Calne)	0	5	0
Dr. Percy Ashworth ...	0	5	0
Mr. Richard Williams ...	0	10	6
Dr. Arthur E. Chilcott ...	1	1	0
Mr. F. B. Hulke, J.P. ...	1	1	0
Dr. Robert Kirkland ...	0	5	0
Dr. James E. Pollock ...	1	1	0
Dr. Sidney George Peill	0	5	0
Mr. H. Gilbert Barling ...	2	2	0
Dr. T. E. Lloyd	0	10	0
Mr. F. S. Manisty	0	10	0
Dr. J. F. Wilson	0	10	6
Dr. J. R. Williams	0	10	6
Dr. T. C. Guthrie	1	1	0
J. G. B. (Heatley)	0	5	0
W. G.	0	5	0
Dr. A. S. Myrtle, J.P. ...	1	1	0
Dr. F. S. T. Hutchison	0	5	0
Mr. John B. Kennedy	1	1	0
Dr. Evan J. Trevor Jones	1	1	0
Mr. Evan Jones	0	10	6
Mr. H. A. W. Lawson ...	0	10	6
Mr. T. Biddulph Goss ...	1	1	0
Dr. Howel Holland White	0	10	0
Dr. G. C. Barker	1	1	0
Dr. Thomas F. Higgs ...	1	1	0
Sympathy	1	1	0
Mr. W. B. Hallowes ...	1	0	0
Mr. J. C. Little	1	0	0
Dr. Herbert P. Taylor ...	1	1	0
Mr. Edward Morris ...	0	10	0
J. W. W.	0	2	6

MEDICAL OFFICER REQUIRED FOR PERTH (WESTERN AUSTRALIA) FRIENDLY SOCIETIES' MEDICAL INSTITUTE, 126, MURRAY-STREET, PERTH.

To the Editors of THE LANCET.

SIRS,—In several provincial papers advertisements have appeared for a medical man for the above vacancy, applicants to seek information from a firm of advertising contractors, St. Bride's-street, E.C. There is evidently considerable difficulty in getting an Australian or local man. Intending applicants should read the rules and conditions very carefully. Rules 20 and 23 (as samples) are worth repeating. Candidates may know what kind of gentlemanly treatment they will receive and what risks they run in taking an appointment of this kind.

Rule 20: "Should the medical officer through illness be unable to perform his duties he shall obtain the services of a qualified practitioner. Should he decline or neglect the committee shall *punish him* by suspension and he shall have no claim upon the institution save only to date of appointment being cancelled."

N.B.—Is the practitioner expected to send to this country for a *locum tenent*?

Rule 23 is no less interesting: "The medical officer shall treat every member or his family who may apply for advice with civility. He shall not detain them any time so as to give them cause to complain, bearing in mind that every individual is paying his share and has a right to *immediate attendance*."

I am, Sirs, yours faithfully,

July 23rd, 1902. M.B., B.S.

*** If all the rules of this institution are such as our correspondent quotes we should certainly advise all practitioners to refrain from applying for the post.—ED. L.

CRYPTORCHISM.

To the Editors of THE LANCET.

SIRS,—A man, aged 28 years, consulted me about a pain extending from a point about an inch in front of the scrotum up to the right loin coming on directly after intercourse with his wife. They had been married about two months and his wife was aged 30 years. She thought there might be something wrong with her, but on examination I found all normal but not so with the husband. The left side of the scrotum contained what I thought might be a wasted testicle, but only like a little thickened skin, and the right side was quite empty and no testicle could be made out in the canal. I presume, therefore, that the organ is still in the abdomen and that the vas deferens is absent or impervious. I cannot find a record of such a case as regards the pain and I could only express a hope that an outlet might be gradually forced My hope, however, is only slight and the question is what is best to be done in such a case. I fear pain, &c., may lead to mental trouble. If through the medium of THE LANCET I can get any information I shall be very thankful.

I am, Sirs, yours faithfully,

July 22nd, 1902. ENQUIRER.

THE DUTIES OF A MEDICAL MAN.

To the Editors of THE LANCET.

SIRS,—A married woman has contracted syphilis. I have not seen her husband for some months, and am not aware that he is under treatment for any complaint. The patient ought to be warned of her contagious condition. If I tell her she will probably (and possibly with justice) accuse her husband as being the cause. If I tell the husband privately and not the patient he may accuse her of infidelity, either justly or possibly with the object of shielding himself. Kindly advise me what I should do. I am, Sirs, yours faithfully,

July 21st, 1902. BETA.

*** Our correspondent's duty is in the first place to prevent the spread of disease. Clearly the husband ought to be warned of the risks that he runs in continuing marital relations if he is not already infected. The wife had better be told that in her condition sexual connexion is not permissible for medical reasons, and the husband must be informed of the true state of the case.—ED. L.

"HAS YOUR HAIR BEEN COMING OFF?"

WE take the following paragraph from the *St. James's Gazette* of July 21st:—

> At Bow-street police-court to-day an elderly woman applied to Mr. Marsham for advice. She said that some time ago her "young man lodger" stole one of her buck rabbits and placed it in his own hutch in which he kept a doe. Mr. Marsham: Well, what was the result? The Applicant: Nine little rabbits, your worship. (Laughter.) Mr. Marsham: That is very satisfactory. The Applicant: Yes, but he only wants to give me one as my share. Mr. Marsham: That is not a bad offer. I suppose your rabbit has not suffered at all? The Applicant: Yes, it has. It's taken all the hair off its back. The magistrate directed an officer to interview the lodger with a view to effecting an amicable arrangement between the parties.

The falling of the hair is a common symptom in an equally common disease, and the question with which we have headed this note is very frequently asked in out-patient rooms. As, however, the lower animals are probably immune from the disease in question we have every hope that the "nine little rabbits" will not develop "snuffles."

THE "Y" FUND.

SURGEON-GENERAL H. S. MUIR begs thankfully to acknowledge additional donations towards the above Fund from Mrs. R. Hackett, Major Carew, D.S.O. (7th Hussars), Major F. Wyville Thomson, I.M.S., Captain W. Rothney Battye, I.M.S., Mr. Ormiston (Hong-Kong), Colonel and Mrs. W. McWatters, R.A.M.C., Lieutenant-Colonel and Mrs. P. J. McQuaid, R.A.M.C., Lieutenant-Colonel and Mrs. Haywood, R.A.M.C., and the following officers of the Royal Army Medical Corps: Lieutenant-Colonels G. A. Hughes, D.S.O., P. J. Dempsey, and H. Charlesworth, C.M.G.; Majors M. J. Whitty, S. F. Clark, H. H. Brown, and J. J. C. Watson, C.I.E.; Captains W. F. Ward and H. G. F. Stallard; and Lieutenant F. P. Lander. The fund now amounts to £448. It may be explained that this is in response to an appeal made privately to members of the profession for benevolent aid in a distressing case which has been described in a letter sent to a limited number of medical men (who would help the cause by kindly "handing on" to *confrères*). Should any reader of THE LANCET desire further particulars with a view to expressing *practical sympathy*, a copy of the letter will be forwarded on application to Surgeon-General Muir, 26, Kensington-gardens-terrace, Hyde Park, London, W.

"RAMIE" UNDERCLOTHING.

THIS material is described as consisting of the fibres of a species of plant of the Boehmeria genus. It forms at the same time a firm, crisp and elastic thread for the substance of a garment for the skin. The fabric is extremely porous while protective. It is remarkable in showing no stains due to perspiration even when worn during the hot weather. The material does not set up any irritating action upon the skin and is comfortable and cool to wear. It does not obstruct perspiration but encourages its distribution and at the same time it conserves the normal warmth of the body. Under the microscope the nature of the fibre was made clear. We received specimens of this material from Messrs. Hall, Nilsen, and Co., of 47, Mosley-street, Manchester

Dr. Battersby Jobson.—We think that Buxton, or possibly Cheltenham, might answer our correspondent's requirements.

During the week marked copies of the following newspapers have been received:—*Manchester Guardian, Birmingham Post, Blackburn Telegraph, Manchester Dispatch, Star, Manchester Evening Mail, Echo, Bedford Mercury, Plymouth Mercury, Dundee Advertiser, Cambria Leader, Cardiff Echo, Newport Weekly Argus, Bradford Observer, Glasgow Herald, Redford Times, Lincoln Echo, Margate Gazette, Cardiff Mail, Durban Irish Times, Anglian Daily Times, Hong-Kong Weekly Press, Revista Medica de S. Paulo, South Wales Daily News, Birkenhead News, &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 24th, 1902.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Rainfall	Solar Radiation Temperature	Maximum Temp. in shade	Min Temp	Wet Bulb	Dry Bulb	Remarks at 8.30 A.M.
July 18	30·04	N.W.	...	120	72	57	56	62	Cloudy
" 19	30·05	N.	...	119	72	53	53	57	Overcast
" 20	29·82	N.E.	0·04	75	62	55	54	56	Raining
" 21	29·88	N.	0·01	79	59	51	51	53	Overcast
" 22	29·93	WNW	0·02	72	58	52	51	55	Cloudy
" 23	29·87	N.W.	0·09	96	69	54	55	57	Raining
" 24	29·83	S.W.	0·07	100	67	56	55	60	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (30th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (31st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (2nd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

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